CLIL Skills

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ISBN 978-90-70910-50-1

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Illustrations: Stephan Timmers, Total Shot Productions, Delft

Design and printing: nr58 / total communication

First published 2010 Expertisecentrum mvt

Re-published 2011 European Platform - *internationalising education*
Reworked and prepared for printing by Sarah Volz, Tekstbureau Helderder, Leiden

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FOREWORD

CLIL is one of the most innovative and successful developments of Dutch and European education. The European Platform has actively supported CLIL since its earliest beginnings in the Netherlands, by acting as national contact for information and advice on CLIL, offering general and financial support to schools, monitoring the quality of CLIL through school visits and certification, and co-operating with researchers and teacher training institutes. In the past twenty years, the number of schools offering CLIL education in the Netherlands has rapidly increased. More than a hundred schools are now members of the school network that was founded by the European Platform in 1994.

This is not an isolated phenomenon: we see a steady expansion of CLIL provision in school education in the great majority of European countries, supported by EU and national policy initiatives. Educators, policy makers and parents consider CLIL a strong means to offer children a better preparation for their future life, in which international contacts and mobility will be increasingly more widespread.

Faced with such a growth of CLIL education, one of the crucial challenges that we have to deal with is the provision of good pre- and in-service teacher training and effective teaching materials. From this perspective, I highly appreciate that we can offer Dutch CLIL teachers a comprehensive handbook, aimed at supporting them in their daily work. In *CLIL Skills* the team of authors, composed of teacher trainers working at Dutch teacher training institutions involved in CLIL, have brought together broad knowledge and long experience in this field, and have created a valuable instrument for the professional development of teachers.

I am confident that *CLIL Skills* will meet the needs of many CLIL teachers: it clearly presents the theoretical background on which CLIL is founded, showing the implications for classroom practice and offering useful practical ideas for CLIL lessons.

I sincerely hope that this handbook will be of value to all who read it.

Jindra Divis
European Platform - *internationalising education*
General Director

HOW TO USE THIS BOOK

Each chapter in CLIL Skills is structured in the same way. In the INTRODUCTION, the topic of the chapter is introduced, and the main points summarised. The introduction also contains one or two Teacher Tasks to get you thinking about the topic. The CASE STUDY provides concrete and authentic examples from the teaching practice.

Next, BACKGROUND AND THEORY offers a more in-depth overview of the theories, principles and academic insights underpinning the chapter's topic. APPLICATIONS IN CLIL illustrates how the theory is applied to the practice of the CLIL classroom. The CONCLUSION summarises the chapter and offers a follow-up Teacher Task for teacher development.

The final section of each chapter, PRACTICAL LESSON IDEAS, comprises a wealth of CLIL classroom activities, many of them taken directly from Dutch CLIL practice. Each activity is presented in the same way: the first section sums up the assignment in a single sentence, the second section describes how to do the activity, and the third section provides examples and suggestions of how the activity might be applied in different subjects.

The practical lesson ideas can be used independently from the rest of the chapter. They are easily accessed through a separate index and recognisably colour-coded. The Teacher Tasks and the numerous Examples provided throughout the chapters are also listed in separate indices. There is a Key to some of the Teacher Tasks at the end of the book.

Words that are *italic and underlined* can be found in the Glossary at the end of the book.
Phrases or sentences marked with an asterisk (*) are examples of incorrect learner language use.

Teacher Task

Example

Practical lesson ideas

CONTRIBUTIONS FROM CLIL TEACHERS

The following teachers contributed to this book by offering (parts of) lesson ideas, examples and projects.

Yvonne Boelman, history, Isendoorn College, Warnsveld
Practical lesson ideas: 35, 40

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Example: 34
Practical lesson idea: 63

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Example: 17

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Practical lesson ideas: 50, 55

Bob Gembey, English, Rijnlands Lyceum, Sassenheim
Example: 28

Arthur de Graaff, biology, Isendoorn College, Warnsveld
Practical lesson idea: 37

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Example: 12 (bullet point 5)

Sally Hill, biology, Van Der Capellen Scholengemeenschap, Zwolle
Case study: Chapter 5, Chapter 6
Example: 5
Practical lesson ideas: 25, 28, 31 (second mnemonic), 46, 53, 57, 76

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Practical lesson idea: 51

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Example: 24

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Practical lesson idea: 31 (first mnemonic)

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Case study: Chapter 4
Examples: 30, 33, 35, 36
Figure: 5.9

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Practical lesson idea: 49

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Examples: 18, 38
Practical lesson idea: 61

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Examples: 23, 40
Practical lesson ideas: 47, 54

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Practical lesson ideas: 40, 43

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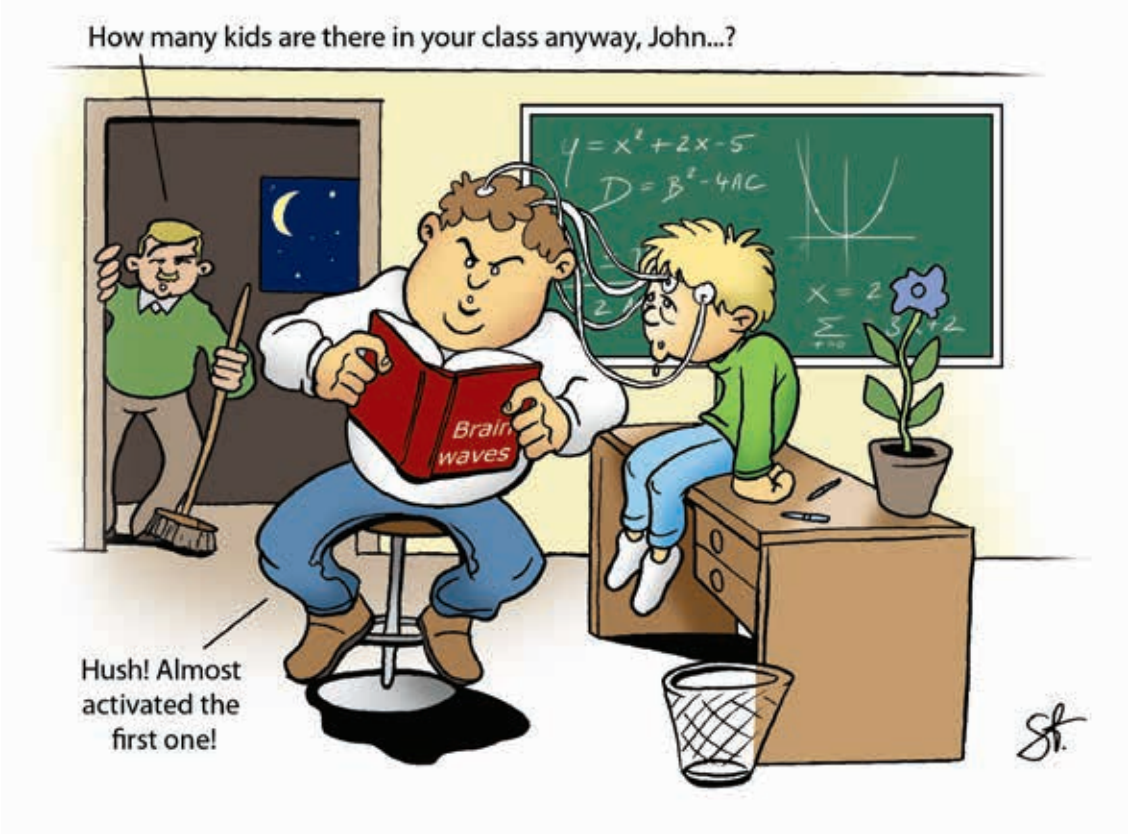
Practical lesson idea: 55


1

1 Activating for CLIL



This chapter covers:

- what activating for *CLIL* is;
- why activating is important;
- different types and ways of activating in the CLIL classroom;
- practical CLIL classroom activities to activate and motivate learners;
- suggestions for follow-up activities.

INTRODUCTION

Activating (sometimes referred to as *activating prior knowledge* or *activating existing knowledge*) involves getting the learners' brains working before introducing a topic or theme, as well as motivating them to learn. It means engaging learners in a lesson topic, and helping them access what they already know about the topic, so that they can link that knowledge to the new material. In CLIL, it is important to activate both ideas and language.

Before you continue, try to activate your own ideas about activating with the help of the Teacher Tasks below!

1 Images of activating

Look at the following six images and answer these questions:

a Write down a title for each image. Which underlying theory or belief about activating knowledge for learning does each image represent for you?

b Which image best illustrates your own ideas about activating prior knowledge, and which one the least? Rank them on a scale from 1 to 6 according to your preference.

2 Activating language

a Write down as many synonyms and associations for the verb TO ACTIVATE as you can. How many different words can you think of that mean something similar to activating?

b Compare your list with the thesaurus entry in the Key.

These two tasks were designed to activate the knowledge, associations and language you already have about activating. All three are important in CLIL. In Task 1 you tap into your own *ideas and knowledge* and *associations* about activating. In Task 2 you activate the *language* you know that is associated with the word activating. Each reader will respond differently, choosing a different image and generating their own language, according to their individual previous knowledge and beliefs. However, readers will all start thinking about the topic, which is necessary to process the information which follows.

CASE STUDY

This geography teacher activated her learners at the beginning of a series of lessons on the topic of China. The lesson is aimed at third-year CLIL learners (14/15-year-olds).

Content aims

At the end of the lesson, learners can:

- identify key issues relating to China;
- categorise them in geographical terms (environmental, historical/social, political and economic).

Language aims

At the end of the lesson, learners:

- know key vocabulary for describing issues in China;
- can skim and scan for specific information in newspapers.

"I wanted to introduce the topic of China. Before the lesson, I asked the learners to bring in a broadsheet newspaper from home. I started the lesson by hanging four large empty sheets of paper on the board. Each had a title: Environmental, Historical/Social, Political and Economic. Then I handed out a worksheet containing an overview of the lesson, and gave the class one minute to write down, individually, at least five things about China they already knew. I told them to keep the list for later and handed out copies of The Economist magazine and English broadsheet newspapers, asking them also to take out the newspapers they had brought from home. I then asked the learners to work in pairs and find headlines relating to China. The next step was for them to write the headlines into one of the four categories on the posters. Then the class discussed the headlines, the meanings of the different categories and whether these covered all the topics in the headlines. I highlighted the topical geographical issues relating to China, linking these to issues they had talked about in previous lessons. Finally, I referred the learners back to their brainstormed notes and asked them to say if any of the points they had thought of were not yet on the board, and in which categories they would put them. The class decided to add one new category, Culture, based on their notes from the initial brainstorm."

Figure 1.1 Activating in a geography lesson

WHY IS THIS CLIL?

This start to the lessons about China contains many characteristics of activating that can help learners to acquire both subject and *language skills*. By reading, speaking and writing about the headlines referring to China, learners can access existing ideas, associations and language that they have about China. Asking the learners to bring in broadsheet newspapers from home helps them to make links between their own culture and language (Dutch or any other home spoken language and culture) and the target culture and language (how people think and talk about countries in geography). It builds on what the learners already know from daily life in different languages, by adding new information and language from newspapers and/or reinforcing the ideas and language knowledge they already have.

The use of newspapers in a number of possible languages (brought in by the learners) is interesting; by bringing both their worlds into the classroom, it acknowledges that the learners are bilingual and bicultural. In addition, the categorisation activity requires the learners to process the ideas at a deeper level, by having to place a headline in a geographical category. The final class discussion brings together the associations they already had with a geographical way of thinking about developments (the culture of geographical thinking). It also brings together fresh language and content *input* from newspapers, their peers and the teacher. This shows how a teacher can link the learners' existing ideas and language with new subject-specific ideas and thus expand both knowledge and language in a CLIL classroom.

BACKGROUND AND THEORY

1 WHY ACTIVATE?

There are several general reasons why it is effective to activate in all classes.

Motivation and raising interest

Activating prior knowledge can increase the learners' motivation. At one end of the motivation continuum, we have *intrinsically* motivated learners, who love learning for itself. At the other end, we have learners who are only *extrinsically* motivated and who need rewards (and sometimes punishment!) to learn. Tapping into learners' prior knowledge and finding ways to connect to their existing knowledge can be useful to increase their motivation.

Expectations

In real life you know what to expect when you do certain actions. For example, when you watch the TV, at some point the news will be broadcast, and if you switch to another channel, you generally know what type of programme to expect. In a lesson, the learners come 'cold' to a subject, so activating prior knowledge helps them to create a context and expectations about what is to come.

Focusing

Learners come into our lessons from other subjects and need to tune in again to a new one. Activating helps them to focus on the topic and the language of the lesson, or to return to a topic which they were dealing with in previous lessons.

Individual differences

Learners are different. They know different things; they come from different cultural and *linguistic* backgrounds. They have different interests, learning styles and intelligences. Activating helps these differences become visible to teachers, so that they will know how to link in to what different learners know. Moreover, it makes the differences visible to the learners, revealing to them that they can gather both information and alternative ways of learning from each other.

2 WHY ACTIVATE IN CLIL?

When activating, a CLIL teacher needs to help learners make explicit in the *target language* both the ideas *and* the language they already know, so that they can make sense of new content as well as new language. Giving learners time to work on what they already know also reveals the gap between what they already know and what they do not know yet. When both teachers and learners become aware of this gap, learning becomes more effective: activating is important both for CLIL learners and CLIL teachers.

The reasons for activating mentioned above have led many teachers to start their lessons by engaging their learners' attention in some way and reviewing what the learners already know about the topic. In the CLIL classroom, learners are learning new ideas through a foreign language, which makes the issue more complex. Although some learners may already have some knowledge of a topic and be able to understand everything the teacher tells them about it, they may not be able to produce the language to articulate their ideas. Accessing prior knowledge, experiences and language are all vital here.

In terms of language, CLIL teachers may choose to introduce *subject-specific terminology*. For example, in a biology lesson on the respiratory system, they might focus on specialist labels for the respiratory system, such as *trachea*, *bronchia*, *diaphragm* and verbs like *inhale* and *exhale*. However, because the pupils are learning in a foreign language, there may also be gaps in their *everyday language*, such as the phrases *breathe in* and *breathe out*. A CLIL teacher, therefore, needs to activate and check the learners' everyday language as well as subject-specific language.

There may be a role for the first language at the activating stage of the lesson, as learners might know concepts and words in their first language and simply not know the words in English. However, the use of the learners' first language in the classroom is something that many teachers try hard to discourage. As with many classroom issues, ultimately, the solution is a question of balance and context. Some background to this topic is covered later – see *Common Underlying Proficiency* under the section on Bilingualism.

Not activating

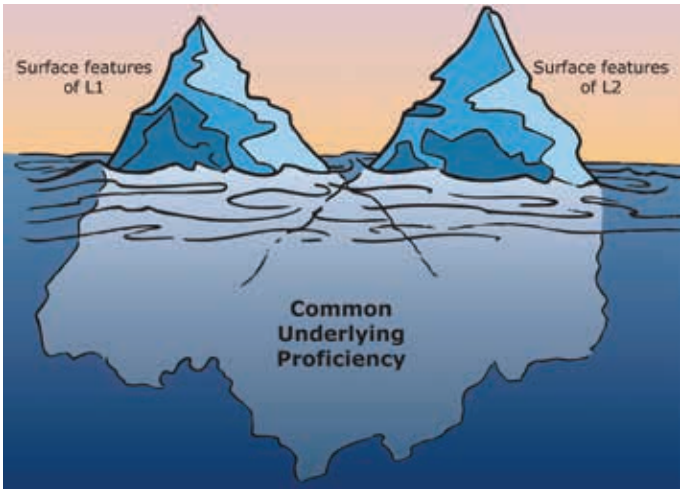
Another way of looking at the topic of activating is to think of what happens if teachers do not have an activating stage in their lessons. The content and language in the lesson are less likely to be remembered and will be more difficult to reproduce later. Without the activating stage, CLIL learners may take longer to process and understand the subject concepts covered in the lesson. After all, activating helps to make connections. The stronger the connections, the better the learners store the information and the better they will be able to retrieve it when they need it. In other words, if teachers do not activate, the learning process may turn out to be both less effective, as the learners may learn less, and less efficient, as they may learn more slowly.

3 WHICH LEARNING THEORIES ARE IMPORTANT IN ACTIVATING AND CLIL?

This section contains a brief overview of the main theories which have influenced our writing in this book. These include ideas relating to bilingualism, second language acquisition, cognitive learning, *constructivism* and *social constructivism*. These theories not only underpin the importance of activating, but they also form the basis of all of the ideas and suggestions we make in this book. Rather than repeat them in each section, we have decided to explain them here, in the first chapter.

Bilingualism

The image of an iceberg is sometimes used to explain the way that bilingual learners' brains use two languages to make sense of their world (Cummins, e.g. 2005).



Cummins compares bilingual learners' brains to an iceberg, with parts of their knowledge invisible, under the waterline, and parts of it visible, above the waterline. Underneath the waterline, the learners have experiences and knowledge of the world, as well as an understanding of how language is used to express their thoughts; all of which is independent of the language they use to express this - this is what Cummins calls Common Underlying Proficiency. Above the waterline, there are the two or more languages bilingual learners can use to express or interpret ideas. Activating in CLIL is important because it shows us what the

learners already know in terms of both language and content, that is, it makes part of their Common Underlying Proficiency visible to the teacher, themselves and others. Some of what learners know may be visible in their first language (*L1*); in other words, they know both the words and the concepts in their first language. For example, they may know the concept of 'metamorphosis' and the word *metamor'fose* in Dutch. This knowledge may not be visible in the second language (*L2*), as they do not know the pronunciation and spelling of the English word *meta'morphosis* – the stress is on a different *syllable*. What needs adding is not the understanding of the concept, just the label (the word *metamorphosis* and how to pronounce and spell it). If learners know neither the concept of 'metamorphosis' nor the language used to describe it, they will need to develop both concept and language at the same time.

Second language acquisition theories

Four language acquisition theories are key to understanding how we learn languages and why activating is important. These are: input theories, intake theories, *interactionist theories* and output theories. The following paragraphs briefly explain these theories. (For more information, see Lightbown & Spada, 2006).

Language input is the language we read and hear. Input theories of second language acquisition (*input hypothesis*) suggest that language input which leads to language learning should be meaningful, relevant and realistic. It should also be at a slightly higher level of language than learners are able to understand (sometimes referred to as i + 1, i being the learner's current level), and there should be plenty of it (see section 2.5). It is important that there may be a difference between what learners can *understand* in the L2 and what they can *produce* in the L2. The activating stage of a lesson can be used to provide rich, plentiful, varied and repeated exposure to the language needed in the lesson, which will help learners move from merely understanding to producing. This in turn helps language acquisition.

Intake is input coupled with understanding. Intake theories suggest that learners will learn language if they come across it frequently and if they take some time to process this language. The activating stage of a lesson can provide familiar and perhaps new language, and ensure that some time is spent using it. Intake is more likely to happen when learners use language during learning activities. These activities should encourage them to notice both what is being said and how it is being said.

Interactionist theories have shown that meaningful interaction is important in language learning, and that learners who focus on the meaning of what they hear, read, speak or write are more effective language learners than those who concentrate mainly on grammatical accuracy. CLIL may be helpful for language acquisition because it provides both the content (meaning) needed for language acquisition and the language needed for subject development. Activating ideas, experiences and language will help learners with their language acquisition as these bring together the learners' ideas and language with new ideas and language in a meaningful context. For this, it is important to use pair and group work so that the learners interact with each other during the activating stage of a lesson.

Output hypothesis argues that in order to learn a language, learners need to produce language: speaking or writing. This is because when they speak or write, learners can notice the gap between what they can say and what they want to say. They can experiment, be creative, and make mistakes. All of this will help them to become more proficient language users. Output can be produced at all stages in the lesson, and is also important in the activating stage of the lesson.

Cognitive learning theories

Another set of theories that are important in CLIL are cognitive learning theories, including constructivism and social constructivism. *Cognitive learning theories* suggest that people remember things more effectively if they spend more time thinking about them, and if their brains have to work harder to complete a task. This means CLIL may be a useful tool for learning, because learners have to work harder if they learn in a

second language. As a result, CLIL learners are more likely to remember what they have learned, not only in terms of language, but also of content. Activating is a way of starting up the thinking processes that will help learners to remember what they learn.

These theories also suggest that we learn when there is a conflict between our existing ideas and new ideas, when we notice a difference between the language we are using and new language needed to express the new ideas, and when attention is paid to how language works to express the new ideas. The activating stage can challenge learners' assumptions about a subject, and draw their attention to different meanings in different contexts, to how words change form in different contexts, differences between languages, and differences between everyday language and *academic language* (register).

Constructivism

In *constructivist* theories of learning, learners are thought to build up knowledge for themselves. These theories stress that worthwhile learning involves the creation of new personal meaning with the new material, and combining it with what is already known. Moreover, these theories argue that learning takes place when learners themselves make sense of what they are learning. Therefore, learners need to get their bearings at the start of a lesson or topic, to gather the information which they already know, so they can make sense of the new information. They can do this by comparing new ideas, information and language with their existing knowledge and experiences. It is essential that it is not the teacher, but rather the learners *themselves* who make the link between their prior knowledge and the content of the subject.

Social constructivism

Social constructivist theories of learning emphasise that learning is a social, dynamic process, and that learners create meaning together, through interacting with one another. By participating in activities and working with other learners or with the teacher during the activating stage of a lesson, learners will also create meaning for themselves. Williams & Burden (1997) present more information about constructivism and social constructivist theories in relation to language learning.

APPLICATIONS IN CLIL

CLIL teachers can activate a new subject in different ways. The choice of activating tasks will largely depend on the lesson or series of lessons which follow. These tasks may seem time-consuming, but they are worth implementing. In the long run, they will often make learning more effective.

Teachers can deal with one or more of the following aspects of a topic:

- language
- knowledge
- experience
- thinking

They can also select activating tasks which take into account:

- interactions
- multiple intelligences

Learners have many different kinds of existing knowledge about a topic. A teacher will determine what to include in a lesson based on the level of prior knowledge the learners already possess. We shall use the previously mentioned geography example to illustrate further ways of activating the four aspects language, knowledge, experience and thinking.

1 LANGUAGE

We can think about features of the word *China* and its use. We know the word *China* cannot take an *-s* to make it plural, that it can be the subject of a sentence (*China is developing rapidly*), or the object of a sentence (*A European minister is visiting China*), that it changes to *Chinese* to describe the people and the nationality. It occurs more frequently with certain words and topics than with others (restaurant rather than station, gymnastics rather than football, red rather than blue, chopsticks rather than spoons). Thinking about *China* in this way helps activate words, so that learners notice how they behave grammatically, how they are pronounced or spelt, and how they are used in sentences. Multiple meanings and *false friends* can also be discussed.

When activating language, the CLIL teacher can check understanding, correct misinterpretation, focus on important words, personalise the meanings of words, highlight the differences between everyday and academic words, and give models of commonly used structures to discuss a topic (such as cause and effect and conditional sentences).

2 KNOWLEDGE

A geography teacher introducing the topic of China has a wealth of existing knowledge in the learners that she can tap into.

Cultural aspects of a subject

We attach social and cultural significance to the word China. When we say "Let's have Chinese tonight," we expect everyone to understand that we mean food, not people. Each school subject will have different associations with China. In a geography lesson, we may think of high population figures; in physical education, of gymnastics or the Olympics; in art, of calligraphy, porcelain, and bamboo; in history, of Marco Polo; in biology, of panda bears and mongooses.

This means that in a geography lesson, we might want to explore demographic issues, whereas in social studies we might want to consider political systems. So, we also want to activate a particular way of thinking about a subject: a subject-specific discipline.

Background or factual aspects

When we think of the word *China*, we have many different kinds of associations not directly related to the meaning of the word. We might know various facts about China; for example, it is a country in Asia, ruled by Communists, hosted the Olympic Games in 2008 and it has implemented a one-child policy to reduce population expansion.

3 EXPERIENCE

The personal experiences of a group of learners will likely vary greatly: some will have more associations with China than others, and the sources of these associations may also differ - film, martial arts, family or travel. The learners may share academic experiences, for example if they have discussed China in class before, but what they remember of this may also vary greatly. Finally, the way they respond to and interpret references to China will depend on their own beliefs, opinions or attitudes.

Personal experience

Learners conceive China through our their experiences, for example through watching or reading the news, seeing Chinese films, having visited the country as a tourist, meeting Chinese people living in the Netherlands, or having family associations such as Chinese relatives.

Academic experience

Learners will have come across China in an academic context in other subjects at school, as well as in previous lessons in a particular subject. They may have discussed China in relation to global warming in geography, greenhouse gases in biology and the role of industrialised and developing countries in contributing to global warming in social studies.

Beliefs, opinions or attitudes

Learners also have opinions about China. They may think that all Chinese people eat with chopsticks, or disagree with the one-child policy, or feel that China should reduce the number of cars to combat pollution.

4 THINKING

When CLIL teachers activate existing knowledge and experiences, they can do so in ways which create a 'conflict' or puzzle in the learners' brains (a *cognitive conflict*). This can be accomplished by creating doubt in the learners' minds about how complete their picture of China is, or how accurate their ideas about China are, and how appropriate their ways of thinking about China are within the context of the school subject. The conflict can be triggered by new information, either from the teacher, other learners, spoken and written texts or images.

Here are some examples of different ways of activating in a lesson about China, dealing with each of the aspects above.

1 Activating activities

What is being activated?	Short description of a possible activating activity
Language	Make a word web with the word CHINA in the centre, and then sort all the words about China into different categories.
Knowledge: cultural aspects	Make a list of similarities and differences between The Netherlands and China in relation to demographics and population control.
Knowledge: background or factual aspects	Scatter some facts or numbers about China on the board, e.g. 1 321 216 931 (population in 2007) Ming (dynasty 1368-1644) one child (policy in force since 1979) 1921 (founding of Communist state) hammer and sickle (yellow, found on red flag) Learners guess what the numbers and facts mean, and predict what the lesson will be about.
Experience: personal experience	Have a class discussion about meeting Chinese people, watching Chinese films, doing martial arts, travelling to China, or eating Chinese food.
Experience: academic experience	Ask learners to spend 5 minutes writing down all the links to China they can think of that have been made in any lessons during the last 5 weeks.
Experience: beliefs and attitudes	Give each learner a red and green card. Read out statements, one by one, which provide an opinion about China. Learners all indicate AGREE with a green card, or DISAGREE with a red card. Then ask learners to elaborate on their beliefs.
Thinking skills	Ask learners to sort all the words the class has brainstormed into six provided categories, for example *history, environment, food, society, politics, other.*

5 INTERACTIONS

Activating tasks that encourage interaction and appeal to different types of learners are important, too. At the activating stage of the lesson, a teacher can have the learners talk to each other, and thus use language in interactions. Setting up pair or group work at this stage, as well as having whole-class discussions, can make the activating stage more effective.

6 MULTIPLE INTELLIGENCES

Teachers can also consider activating learners through different learning styles or multiple intelligences, so as to reach and engage a larger number of learners. Learners can choose the activity or activities they personally prefer to carry out. Naturally, we are not suggesting that a teacher always offer eight different types of activities; this depends on the learners and teacher in question. Here are some examples of activating activities for each of the eight multiple intelligences. The topic is population growth in China.

2 Activating through multiple intelligences

Intelligence	Way of activating through each intelligence
Logical-mathematical	Learners match labels with the names of different countries to different graphs indicating population growth. One should be for China.
Bodily-kinaesthetic	Teacher prepares statements about population growth with which learners agree or disagree. She reads out the first statement. Learners who agree go to one part of the classroom; those who disagree go to another part. They discuss their opinions about the statement. The same with statement 2, and so on.
Linguistic	Teacher writes the title of an article about China on the board, e.g. "Population growth: Friend or foe?" or "Who controls the family?" Learners guess what the article will be about, using the prompts Who? Where? What? When?
Musical	Teacher plays Chinese music (e.g. Monkey: Journey to the West) as learners brainstorm all they ideas they have about China.
Interpersonal	In pairs, learners discuss what they know about population growth and the one-child policy in China.
Intrapersonal	Individually, learners complete a sentence stem 10 times, such as *China is...* (see practical idea 1.9.15).
Naturalist	Learners work in small groups to predict the environmental impact of population growth, using *key words* such as *water, forests, air* and *travel.*
Visual-spatial	Teacher shows a picture of a very crowded Chinese scene, asking learners prompting questions, such as Where do you think this is? Why is it so crowded? Where are these people going? What time of day is it? What are they thinking?

LINK TO LESSON

The information, skills or language which teachers activate need to be linked, of course, to the lesson they are preparing to teach. A teacher in a vocational hotel and catering school doing a unit on international food, who wants her learners to create a menu for a delicious Chinese meal at a four-star restaurant in Amsterdam, might choose to activate the language of Chinese food. She could ask groups of learners sitting around a large sheet of paper to brainstorm Chinese food in English (chop suey, sweet and sour pork, noodles). But a geography teacher's aim might be for learners to understand the ideas and policies of China related to the population explosion. Then, a more appropriate activating activity might be to ask them to agree or disagree with a number of statements related to the one-child policy in China; for example, "Everyone in the world should be allowed to have as many children as they like", "Chinese people should be sterilized after having one child" or "We should have a two-child policy in the Netherlands".

The amount of time a teacher spends on the activating stage of a topic depends on the context. It may take two minutes, ten minutes or a whole lesson. In any case, it is worth spending some time on forging explicit links to what bilingual learners already know.

CONCLUSION

An essential part of the learning process is to help CLIL learners activate the many different kinds of knowledge, experiences and language that they already possess and then use these to build on. When learners study a subject through a foreign language, they have to take in both new ideas and new language. Therefore, it is important for the CLIL teacher to encourage activation of the knowledge, experience and language networks in the brain to strengthen the connections and speed up the number of activations. This will ultimately help learners to learn both the language and the content more effectively.

To sum up, an activating stage of a CLIL lesson can:

- engage the learners' interest and curiosity, thus motivating them;
- provide rich (plentiful, varied, repeated) language input;
- help learners notice features of the language (meaning, form, differences between Dutch and English, or between everyday and academic language);
- help learners notice the gap between their knowledge and understanding of concepts in their first and second language;
- help learners notice the different labels used for concepts they already knew in their first language, but yet not in their second;
- help learners to make the language and content of the lesson meaningful to them personally;
- stimulate interaction between learners;
- encourage learners to produce (spoken or written) language;
- activate relevant, useful or half-remembered language for the lesson;
- activate relevant cultural and background knowledge for the lesson;
- activate relevant personal or academic experiences which will help the learners in the lesson;
- activate existing beliefs about and attitudes to the topic of the lesson;
- challenge or surprise the learners in some way;
- challenge the learners to think more deeply about the topic of the lesson;
- appeal to different learning styles or multiple intelligences.

3 Teacher development: activating for CLIL

1 Select three different activating ideas from this chapter, and then use each one to design three activating activities for your own subject.
2 Choose the five activating activities in this chapter that you liked best. Which theory or theories are reflected in each of the chosen activities? What does that say about your own ideas about learning and activating?
3 List your personal criteria for what makes a successful activating stage in a lesson, and put them in order of importance.
4 Choose a topic you will be covering in class, and design eight multiple intelligence activating ideas.

PRACTICAL LESSON IDEAS – ACTIVATING

1 KEY WORDS

Guess the topic of the lesson and explain useful words.

Write ten random key words about a topic on the board. Ask learners to answer these questions:

- What will the lesson be about?
- Which words can you add to these?
- Which words are unfamiliar?

Provide definitions of the least familiar words.

Biology: Classification

Write the words *kingdom*, *class*, *family*, *species*, *genus* and *phylum* on the board:

Ask learners to guess what the lesson will be about, and whether they can add any more words related to this classification. Then ask them to look up and note down a definition for one word. In turns, learners read aloud their definition and everyone writes down which word is being described.

2 COMPETITION: QUICKEST OR MOST

Quickly list a fixed number of words or produce as many as you can, related to the topic of the lesson.

Write the topic of the lesson on the board. Learners work in pairs to either

1 be the first pair to write down ten verbs related to the topic; or
2 be the first pair to write down the most verbs (or nouns) related to the topic.

Geography: Global warming

Quickest

Ask learners to work in pairs and write down ten verbs used to talk about global warming. Which pair is the first to get ten?

Most

Give learners one minute to write down as many verbs used to talk about global warming as they can think of. Which learner produced the most in the time available?

3 QUESTIONS

Write down ten questions about the lesson topic.

Write the topic of the lesson on the board. Learners work in pairs and write down ten questions about the topic - at least four should begin with who, what, how and why.

History: The slave trade
Ask learners to write down ten questions they would like to have answered about the slave trade. They might produce questions like:

- Who owned slaves?
- What happened to children born into slavery?
- How were slaves treated?
- Why was slavery acceptable to people at the time?
- Where did the slaves come from?

4 SCRAMBLED SENTENCE

Mix up the words of a sentence about the topic and ask learners to re-create the original sentence.

Choose one sentence or question which is relevant (humorous, interesting, controversial) to your topic and mix it up. Write the scrambled words on the board, or create small cards – one word per card. Ask the learners to create one sentence from your mixed up words. If it is a question, you can ask for their answers and discuss these.

Science: Nuclear power
Scramble the sentence: Nuclear power is the most environmentally friendly means of generating energy.

Nuclear the energy. means	environmentally power friendly	is most of generating

Ask learners to recreate the sentence. Once they have completed that task, they discuss how science might prove or disprove this claim.

You can scramble a paragraph or complete text, too. Make cards or a handout of the mixed-up sentences or paragraphs and ask the learners to reconstruct the text or paragraph.

5 RED AND GREEN CARDS

Decide if statements about a topic are true or false.

Create a list of ten true and false statements about a topic you are going to cover. Each learner receives one red and one green card. Read your true/false statements out one by one. The learners each decide if the statement is true (green card) or false (red card). Once the statement has been read out, they hold up a green or red card. After each statement, you can either discuss their answers, or leave them unanswered and repeat the activity once the lesson is over to check what they have learned.

This activity can also be done with agree/disagree statements, for example if you are discussing an ethical topic.

Physics: Solids, liquids and gasses

Read out these statements:

1 A brick can be compressed.
2 Oxygen has a fixed shape.
3 Water can change its shape to fit any space.
4 Metal can flow.

6 PROPS OR VISUALS

Ask questions about objects or pictures connected to the topic.

Bring in and display a number of objects or visuals related to the lesson.

Art and design: The construction of pop-up cards

Props

Show learners four examples of pop-up cards and ask them questions, such as "Which do you like best and why?", and "Which would be the easiest and/or most difficult to make and why?"

Visuals

Select an intriguing picture, cartoon or photograph of an optical illusion. Make enough copies for everyone, or use a smart board or data projector. Ask learners to identify the techniques that create the optical illusion. You can find examples of optical illusions at www.yourdailydump.com/category/optical-illusion

7 VIDEO CLIP

Watch a short video clip related to the topic and answer questions.

Search for a video clip related to your concept or topic on YouTube or elsewhere on the Internet to show to your learners. Give them some viewing questions beforehand. Discuss the questions afterwards.

Social Studies: Gender differences
Learners watch the clip (a comedy sketch about the effect of education on men and women) and list which differences between men and women are emphasised in the clip.
Women: Know Your Limits! (Harry Enfield): http://www.youtube.com/watch?v=LS37SNYjg8w

Biology: Homeostasis and the pancreas
Learners watch the clip. While watching they write down what the pancreas does and why it is an important body part.
Weird Al Yankovic: Pancreas Song: www.youtube.com/watch?v=Tq_-zxPgFzE

8 INTERNET

Learners find information on the internet individually about a topic before the lesson and then sort all the information they have found into categories.

For homework, ask learners to bring an image or a text they have found on the Internet about the topic you are going to cover in the lesson. At the beginning of the lesson, they pool all the images or texts and then categorise them.

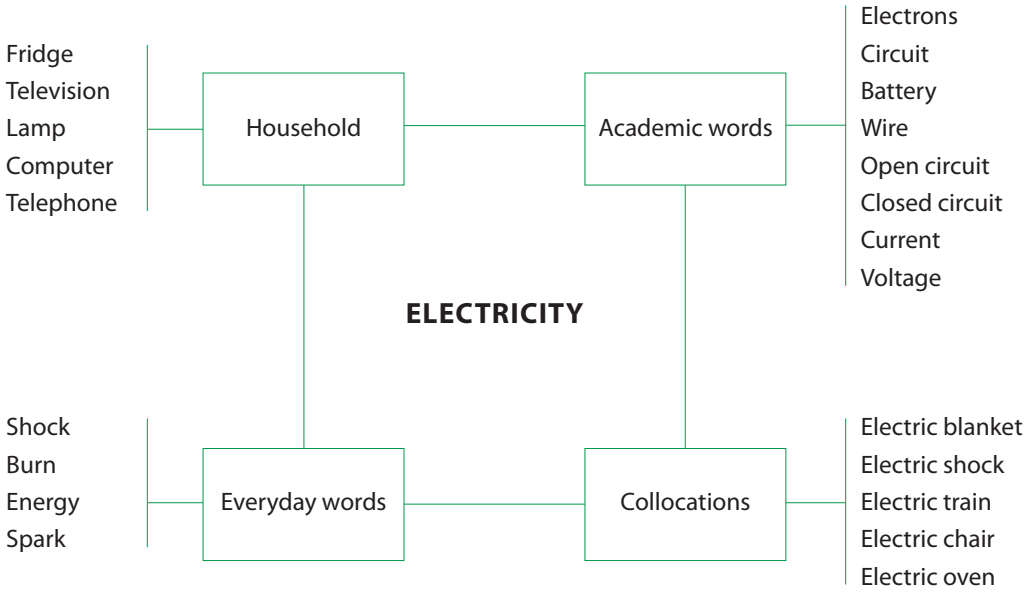
History: Spanish occupation of the Netherlands
Ask learners to find a 50-word text about or an image of the Spanish occupation of the Netherlands and bring a copy to the lesson; their copies need to be large enough so that they can be read at the back of the classroom. As they enter the classroom, learners stick their texts or images on the board with tape and sit down. In pairs, the learners then look at the ideas and/or images on the board. Their task is to think of four or five main categories into which all the texts and/or images could be placed.

9 SPIDER DIAGRAM

Create a mind map of useful words for a topic.

Choose a main concept related to the material you want to cover. Place it in the middle of the board in a circle or square. Ask learners to call out sub-topics related to your main concept. Together, create a spider diagram related to the topic, with each leg of the spider relating to a sub-topic.
You can do this in two stages; first ask for as many associations as possible, and then ask learners to put all the words into categories. Once learners have made a number of spider diagrams, they can create them by themselves or in small groups.

Physics: Electricity



10 KWL GRID

Learners list what they know, want to know and have learned about a topic.

Learners complete the three columns of the KWL (know, want, learn) grid. In the first column, they write what they know; in the second column what they want to know. The third column is for summarising what they have learned at the end of the unit. To use this activity effectively and focus the learners, it is important that the desired final product is clear: it is hard to complete a KWL grid without an explicit aim.

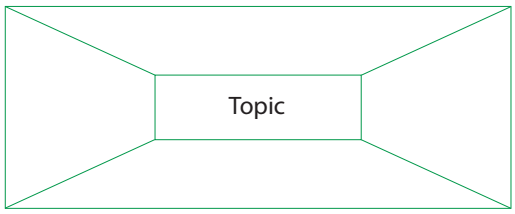
History : Project making a newspaper article dated somewhere in the autumn of 1939

Know	**Want**	**Learn**
Start of WW2 First year of war Germany involved	Where is our story? Who was involved? What was happening? Countries involved? Famous people Role of Netherlands	

11 PLACEMAT

Learners write ideas about a topic individually and then compare and combine their ideas.

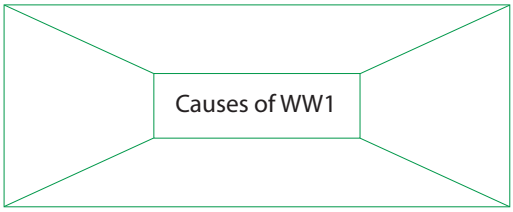
Make groups of four. Learners sit around a table with a large sheet of poster paper in front of them and a marker each. First ask the learners to draw a 'placemat' on their paper, like this:



Round One
Provide the learners with a question or issue. Write this in the middle of the placemat.
Each learner then writes a comment or opinion in their own space on the placemat.

Round Two
The learners read what the others have all written (by turning the placemat around) and discuss a 'sponge' question. This is a question which aims to combine or categorise the ideas from Round One. It is important to have a fresh question at this stage which further processes the ideas from Round One.

History: Causes of World War 1
Round One



What do you think were the causes of the Great War?

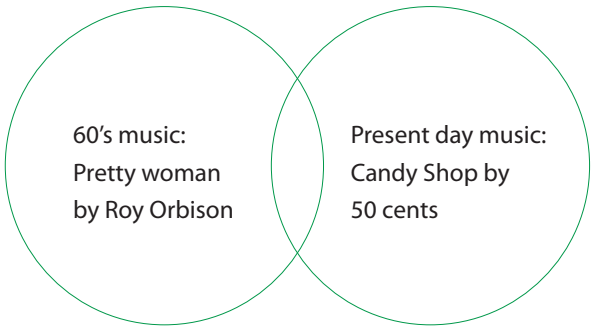
Round Two ('sponge' question)
Discuss and read each other's ideas. In the centre of the placemat, write what you all consider to be the two most important causes of the Great War.

12 VENN DIAGRAM

Complete a Venn diagram about a topic.

A Venn diagram is an excellent tool for activating prior knowledge in order to highlight similarities and differences. Learners write the two topics to compare in the circles, and then write similarities between the topics in the middle (overlapping) space, and differences in the outer spaces.

Music: 60's and 90's songs
Provide each pair of learners with an empty Venn diagram on a sheet of paper. Choose two songs which the learners know to compare. They write the title of Song 1 in the left circle, the title of Song 2 in the right circle. Ask them to write similarities and differences between the two songs.



13 THINK, PAIR, SHARE

Learners answer a question first individually, then in pairs and then share their answer with the whole class.

Think, pair, share is a simple technique which gets everyone thinking about a topic. Individually, each learner writes down their answer to a key question (on language, knowledge or content) provided by the teacher. This gives them some time to think for themselves. Next, in pairs, learners compare and discuss their answers with each other. Finally, have a short plenary discussion of some of the groups' answers.

Geography: Earthquakes
Key question: What do you think causes earthquakes? Or: Why do earthquakes happen?
Music: Rap music
Key question: What do you think are the characteristics of rap music? Or: What is a rap song?
For example, think about beat, background, topic, story, rhyme and refrain.

14 PREDICT, OBSERVE AND EXPLAIN

Present an event and ask learners to predict what they think is going to happen, then watch what actually happens and explain why they were right or wrong.

In a predict, observe and explain sequence, your learners are expected to predict the outcome of an event or experiment, observe what actually happens and then explain why their prediction was either right or wrong. This activity is best suited to science classes. It can be an individual assignment or a small group activity. The aim is not only to activate prior knowledge but also to promote personal involvement of your learners.

Science
Some interesting examples of cartoons used for predict, observe and explain activities can be found here: http://www.conceptcartoons.com/science/examples.htm.

15 SENTENCE STEM

Learners complete a sentence about a topic.

Think of a 'sentence stem' which can be completed in various ways related to an aspect of your topic. Write the stem on a worksheet or the board ten times. Use a sentence stem that learners can easily complete; nothing too difficult. For example:

Shakespeare….
Shakespeare….
Shakespeare….
(etc.)

The learners have to complete the sentence in as many different ways as they can. The follow-up can be a *Think, pair, share* or *Placemat* activity.

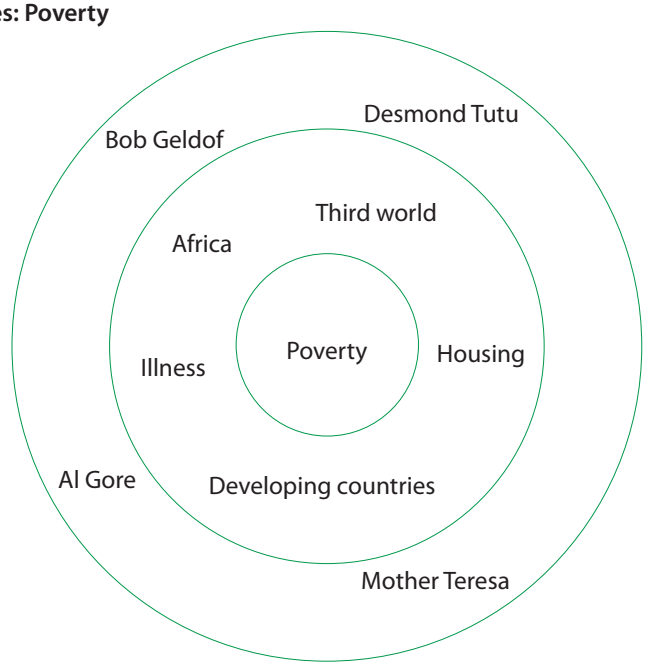
Geography: Deserts
The desert is…
Biology: Cells
Cells…

16 TARGET PRACTICE

Learners complete a target image with ideas and people related to a topic.

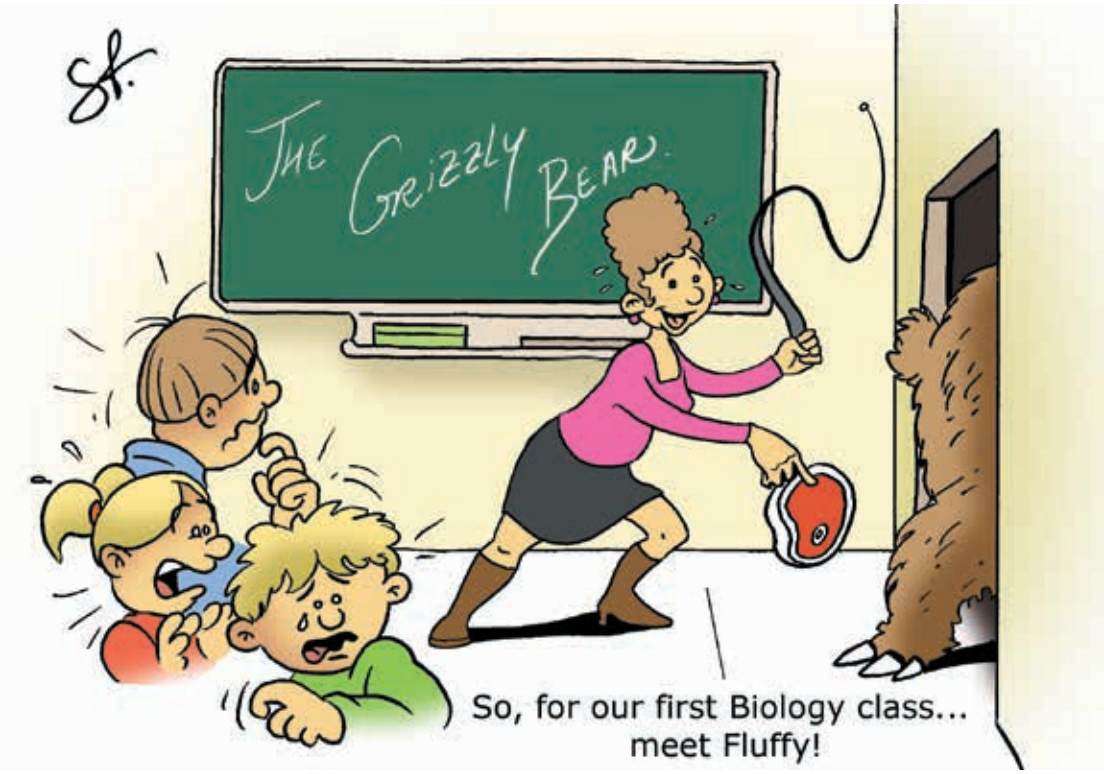
Provide a handout of a target for each learner, with the lesson topic in the centre of the target. In the second, slightly larger circle, learners brainstorm about the topic. In the outer circle, they write down the names of people who might have influenced thinking related to the topic (either their ideas or the topic in general).

Social studies: Poverty




2

2 Providing lesson input for CLIL



This chapter covers:

- what lesson input for CLIL is;
- why lesson input is important;
- different sorts of lesson input;
- difficulties learners have with input;
- different ways of evaluating lesson input;
- *BICS* and *CALP*;
- practical CLIL classroom activities for providing lesson input.

INTRODUCTION

Would you bring a grizzly bear as lesson input into your classroom to get your learners excited about a new topic, or would a picture or a DVD be enough? Lesson input can be defined as 'the information used to help learners understand ideas and construct meaning'. Input is the foundation of every lesson, and can be linguistic or *non-linguistic*. It may consist of items from a video clip or a text in a course book or it may be a graph or a photograph. Whereas linguistic input is based on language, such as texts, non-linguistic input may take the form of a model, a photograph or a live example, such as Fluffy in the cartoon. Learners listen to, watch, look at or read input; from it, they get information and language they can use to carry out tasks or activities. This chapter deals with providing, selecting and adapting lesson input for CLIL.

4 Your own ideas about input

What kinds of input do you use? Is your focus mainly on content, or do you also consider language? This activity is designed to start you thinking about input.

1 List six different types of input you have used in your CLIL classes.
2 For each of your examples, note down the content and the language input, like in the following example:

Type of input	What is the content input?	What is the language input?
Video about Hinduism and Buddhism	Important stages of religious ceremonies	Terminology used to describe Hindu and Buddhist ceremonies

3 ANALYSE THE TYPE OF INPUT YOU USE IN YOUR LESSONS, IN TERMS OF:

- the type of input you provide (spoken, written, visual, hands-on);
- the amount of input you provide;
- how much *visual support* there is;
- the language used in the input;
- the level of the input.

CASE STUDY

Input in a CLIL history lesson

This history teacher was teaching first-year pupils aged 12-13 about Britain and the Netherlands in Roman times.

Content aim:

At the end of this initial lesson, learners can:

- divide information into two themes - lifestyle and warfare

Language aims:

At the end of the lesson, learners can:

- scan texts for specific information
- understand words related to lifestyle and warfare

The input for my lesson was a dozen or so photocopies of illustrations and extracts from observations by Roman writers about the lifestyle and ways of warfare they encountered on arrival in Britain and the Netherlands. These included short texts written by Roman authors and drawings of houses, people dressed for war, and household objects.

Figure 2.1 Teacher's comment

Source 1

The Britons with their long swords and short shields showed determination and skill in evading or brushing aside the Roman missiles, while on their own side they launched dense volleys or spears. Then the Roman general Agricola ordered his soldiers to bring things to hand-to-hand fighting. This manoeuvre was difficult for the enemy, whose shields were short and swords too long.

Source 2

The Celts had a fighting season (a bit like a football season), which lasted during the spring and summer months. As the season got nearer, the men sharpened their spears and polished their shields. They painted their bodies with magical, swirling patterns using blue dye called woad. They washed their hair with clay and water, which made it stand up in spikes! Many of the battles were fought between local tribes about land or stolen cattle.

Figure 2.2 Input for a history lesson

WHY IS THIS CLIL?

Providing input in this lesson helps the learners in several ways. The input is a mixture of illustrations and text; which makes it *multimodal*. This allows some content to be processed visually as well as linguistically; the visuals support the textual input and both new and familiar language are supported with images.

BACKGROUND AND THEORY

1 PROVIDING AND PROCESSING INPUT

There are two main ways in which CLIL teachers work with input:

- They provide appropriate input in English.
- They help learners to process input in English.

This chapter is about providing lesson input: choosing input in terms of subject, academic, and language level. Chapter 3 covers *processing input*: ways to guide learners to understand and process the input.

In the CLIL classroom, when learners are learning content through a second language, several factors related to input must be taken into account. Firstly, the input must be appropriate content material or resources, which make the right intellectual or academic demands on the learners. Secondly, the input must be provided at the appropriate level of English. This can be more challenging in CLIL than in a monolingual setting: input at the right cognitive level might use language which is too difficult for their learners, while input at the right language level may not be challenging enough in terms of content.

Example 3 was taken from a history book for first-year CLIL learners. The cognitive demands of this extract are at the appropriate level, but the language level is far too advanced.

3 History text

Papyrus grew abundantly in the marshy Nile Delta. The Egyptians used these reed-like plants for many purposes. They cooked and ate the stem. When dried, the stems were used for making rope, mats, baskets and huts. What are the men on this relief making from the plants?

Example 4 was taken from a biology book also aimed at first-year CLIL learners. In this extract, the language demands are at the appropriate level, but the cognitive demands are not challenging enough.

4 Biology text

People aged 12 to 18 are called teenagers. They start to look quite different. The period during which these changes take place is called puberty. Boys and girls start to look more like adult men and women. When you become an adolescent, you become more independent of your parents.

Both language and cognitive level must be taken into account when selecting input. But providing input at the right language and cognitive level is not enough. Learners also need to be actively engaged with the content in some way. For example, a teacher could describe a chemical process or historical event in a lecture with no visual support. However, this will not help learners understand or remember the input very efficiently. CLIL teachers need to help learners to understand and process both content and language.

The four factors related to providing and processing input are illustrated in the table below. Teachers will stimulate more effective processing of the ideas and language to be learned if they consider all of these factors.

Factors	**Appropriate cognitive demands**	**Appropriate language demands**
Providing input	√	√
Tasks for processing input	√	√

Table 2.1 Factors to consider related to providing and processing input

The following sections demonstrate how CLIL teachers can provide input at the appropriate content and language level for their learners.

2 MULTIMODAL AND VARIED INPUT

Since learners use different ways to take in input, it is useful if input is multimodal at various stages of a lesson or lessons. In the CLIL classroom, it is even more important to exploit as many input modes as possible, both linguistic and non-linguistic, to ensure that as many learners as possible understand the input.

Input can be:

- visual
- spoken
- hands-on or practical
- written

Visual input (real objects, photographs or models)

Subject	Input example	Content input	Language input
Maths	Real objects - a glass of water tipped on its side	The characteristics of an ellipse	Language of description, e.g. simple present tense to describe the shape of water. Nouns and adjectives, e.g. *ellipse, elliptical*.
History	Photographs - historical events	The chronology of a historical period	Pronunciation of years (2050 *two thousand and fifty*, 1950 *nineteen fifty*). Present simple tense for permanent states.
Biology	Models - a model of the human body	Location of main body parts	Adverb phrases and prepositions such as *on the right/left, above, below, under/underneath*. Vocabulary of parts of the body.

Table 2.2 Visual input

Spoken input (with or without visual support)

Subject	Input example	Content input	Language input
Maths	Spoken and visual - teacher explanation with drawing on board	The properties of a right-angled triangle	The use of the simple present tense for facts. Vocabulary of the characteristics of a triangle
ICT	Spoken and visual - PowerPoint presentation	Different types of memory storage in a computer	Linking words, such as *firstly, secondly, next, finally, lastly*
Physics	Spoken and visual - demonstration of a tennis ball dropped from one metre above the ground	Height and velocity; describing the functions determined by the height of a bouncing ball	Language of prediction, *if* sentences in the present tense (*if* and *will* used together). Language of questioning, e.g. *What do you think might happen if...?*
Geography	Spoken and visual - video or DVD on earthquakes with journalistic commentary	The damage done by earthquakes of different strengths (Richter scale)	Present continuous tense used to describe events happening right now
History	Spoken - podcast recording of Martin Luther King's "I have a dream" speech	Martin Luther King's character and appearance; qualities of a good orator	Rhetorical elements in a charismatic speech, e.g. repetition of words (*history, negro, justice*) or phrases (*Now is the time... I have a dream*). Use of dramatic pause. Pace and tempo. Tone and pitch of voice. Starting and ending of a speech
Art	Spoken - song about Henri Matisse from www.songs-forteaching.com	Information about Matisse's life and art	Regular and irregular past tenses, e.g. (regular) *named, painted, owned, started, liked,* (irregular) *felt, thought, sold, taught*

Table 2.3 Spoken input

Hands-on and practical input

Subject	Input example	Content input	Language input
Chemistry	Experiment - a week before a lesson on stalactites and stalagmites, learners carry out an experiment which quickly shows how stalagmites form. Fill two jars with warm water. Mix in Epsom salts (hydrated magnesium sulphate or $MgSO_4$ $7H_2O$) until no more will dissolve. Wet a piece of string and tie a weight or stone to each end. Drop one end of the string into each jar. Put a plate between the two jars, with the string hanging over the plate. A 'stalagmite' will form on the plate. Learners observe what happens and report back the next lesson.	How stalagmites are formed	Language of instruction, e.g. use of imperatives. How to say chemical elements in English ($MgSO_4$ is *M G S O four*)
Physics	Experience - learners rub a balloon in their hair and then dangle the balloon from a string in front of a television screen to observe what happens.	Electrostatic forces: what are they and where can they be found in our lives?	Language of prediction, *if* sentences in the present tense (*if* and *will* used together)

Table 2.4 Practical input

Written input (with or without visual support)

Subject	Input example	Content Input	Language Input
Biology	Visual written (diagrams, cartoons) - a flow chart describing homeostasis	The processes involved in homeostasis in living organisms	Words frequently used to indicate a process, e.g. *first, next, later, after that, afterwards, when, meanwhile, then*
Geography	Visual written - a bar graph showing the world population in billions and the availability of water per capita between 1950 and 2050.	Population expansion predictions and the amount of water available for these expanding populations around the world	Pronunciation of years (2050 *two thousand and fifty, 1950 nineteen fifty*). Vocabulary related to graphs, e.g. *axis, histogram, bar graph, line graph*. The language of probability (*might, could, perhaps*) and the use of will to predict future events
Chemistry	Visual written - poster of the periodic table	The relationship between different chemical elements	Pronunciation of chemical elements (*aitch two oh* for H_2O)
Economics	Written - text on inflation	The causes and effects of inflation	Language of cause and effect. Vocabulary, e.g. *consumer, purchasing power, currency, credit, debit*
All	Written - modelling. An advisory brochure which resembles one that the learners will be producing themselves on a different topic.	The organisation and layout of a good brochure	Language for clear instructions (use of imperatives; use of clear titles and headings; few adjectives)

Table 2.5 Written input

5 Poem poster

Below is a model of a poem poster which the teacher created herself to demonstrate how to write and illustrate a poem and poster about a sea creature.

Figure 2.3 Poem poster of a jellyfish

Amount of input

To learn a language, learners need to receive a great deal of input in the target language. Ellis even goes as far as to say that "in general, the more *language exposure* they receive, the more and the faster [learners] will learn" (Ellis, 2005). It is important, then, that learners read and listen to English a great deal, and preferably outside the classroom as well as within. Moreover, teachers need to consider the difficulty level of new concepts and the amount of new information learners can take in at any given moment. Teachers also need to find a balance between the amount of new information and the language and content level of the information they choose to provide.

Visual support

The amount of visual support and the layout are instrumental in how easily input can be understood. If the content or language is difficult, a teacher can support text with visuals or hands-on activities, or provide a number of different tasks. Teachers can exploit the visuals provided in course books, or actively look for other sources of visual support, such as photographs or video clips. The history lesson case study and the jellyfish poster above are good examples of using visuals and text to assist understanding of both content and language.

Using input for different purposes

In real life, when reading a novel or a magazine or watching a television programme, this is often extensively for pleasure. When reading a text book or watching an educational DVD for study purposes,

we read more closely. We read newspaper headlines quickly to decide what to read, skim a book in a bookshop to decide whether to read it, and scan a TV guide to decide what to watch.

In the CLIL classroom, teachers can also help learners to use input for different purposes. Sometimes, learners need to understand more or less every aspect of a topic; at other times, a more superficial understanding of the general meaning of the input is enough. Sometimes, the learners need to focus on the language usage, as they will need it to perform tasks based on the input. CLIL teachers can help their learners process the lesson input by selecting input that is related to the content and language aims of their lessons. In the history case study in this chapter, the teacher selected a variety of texts and visuals in order to reach her dual aim of clarifying aspects of lifestyle and warfare in Roman times and, at the same time, introducing words that describe lifestyle and warfare in Roman times.

3 BICS AND CALP

CLIL teachers may wonder why their learners seem to be able to speak English fluently but still have difficulty understanding academic English, for instance when reading a text on nutrition for biology, discussing graphics in mathematics, reading a newspaper article about communism for history, or analysing a written experiment for physics. Professor James Cummins distinguishes two dimensions of language: conversational and academic (Cummins, 2000). The former he terms Basic Interpersonal Communication Skills (*BICS*) and the latter Cognitive Academic Language Proficiency (*CALP*).

BICS are basic language skills used in informal communication, for example at school breaks or parties, on the telephone, or when playing sports. In terms of lesson input, BICS include day-to-day language and the many *contextual clues* that aid understanding. BICS involve situations in which learners can use visual clues, gestures or facial expression to communicate with each other. Second-language learners generally achieve BICS in two to five years.

CALP refers to the dimension of more formal, academic language which learners need to do well at school. CALP requires higher *thinking skills* such as applying, analysing and creating. In CALP, clues to help learners understand are often reduced or absent. Lesson input for CALP is read from a textbook or presented by the teacher, and the concepts are more academically demanding. Consequently, the spoken and written language needed to understand and produce for CALP is more complex than for BICS.

Teachers can teach their learners specific CALP skills and they can guide their learners to gradually move from BICS to CALP. It may take five to seven years for second language learners to become proficient in academic language skills (Collier, 1995).

4 CUMMINS' QUADRANTS

In the ideal CLIL classroom, lesson input is provided at the appropriate subject, academic and language level. Teachers play an important role in the learning process by providing lesson input that is both academically challenging and not too difficult linguistically. Cummins developed a model of four quadrants to describe the cognitive and language level of lesson input. Cummins' Quadrants distinguish between BICS or CALP lesson input. Consider the following quadrants, which distinguish between easier and more difficult input for a geography lesson about erosion:

<table>
<tr><td colspan="5">LESSON INPUT: CAN BE UNDERSTOOD WITHOUT MUCH THINKING</td></tr>
<tr><td rowspan="2">A LOT OF CONTEXT</td><td>Quadrant 1

Input supported by many visual cues and day-to-day language.

DVD designed for children telling the story of how a rock becomes a pebble.</td><td>Quadrant 2

Input with little context, cognitively undemanding, day-to-day language.

Radio programme for children telling the story of how a rock becomes a pebble.</td><td rowspan="2">LITTLE CONTEXT</td><td>B
I
C
S</td></tr>
<tr><td>Quadrant 3

Input supported by much context but cognitively demanding, more abstract language.

Nature documentary on erosion.</td><td>Quadrant 4

Input with very little context, cognitively demanding, more abstract language.

Scientific article in a geography journal on rock erosion.</td><td>C
A
L
P</td></tr>
<tr><td colspan="5">LESSON INPUT: NEEDS DEEPER THINKING</td></tr>
</table>

Figure 2.4 Cummins' Quadrants

In Quadrant 1, the input language is concrete and there are many contextual clues to aid understanding, such as photographs or diagrams. The lesson input is academically not very challenging.

In Quadrant 2, the language of the input is also concrete, but there are fewer contextual clues and the concepts are more difficult.

In Quadrant 3, the lesson input is academically challenging and there is a lot of contextual support to help learners understand. Moreover, the language level is more abstract.

In Quadrant 4, the lesson input is most challenging with regard to both language and contextual support. The language is abstract, and there are no illustrations or visual clues to support the context.

Cummins' Quadrants can help you determine whether or not input is appropriate for the content and language goals the learners need to achieve. What is difficult for one learner or class may be easy for another. To assess input in terms of both language and content, the following questions may be helpful:

- How easy or difficult is the information for learners?
- How much context is provided to help learners understand?
- How easy or difficult is the language for learners?
- In which of the four quadrants would I place my input?
- Is that quadrant appropriate for these learners?
- How can I adapt the input to make it more suitable for my learners?

There are a number of short texts in this chapter, which we would place in the quadrants as follows. Refer to them as you read this section.

<table>
<tr><td colspan="5">LESSON INPUT : CAN BE UNDERSTOOD WITHOUT MUCH THINKING</td></tr>
<tr><td rowspan="2">A LOT OF CONTEXT</td><td>Quadrant 1

Text A:
'Girl, 16, now has SEVEN children'</td><td>Quadrant 2

Text B:
Fire Making'</td><td rowspan="2">LITTLE CONTEXT</td><td>B
I
C
S</td></tr>
<tr><td>Quadrant 3

Text C:
'Send fewer to jail, Straw urges courts'</td><td>Quadrant 4

Text D:
'The Climax of Humanity'</td><td>C
A
L
P</td></tr>
<tr><td colspan="5">LESSON INPUT: NEEDS DEEPER THINKING</td></tr>
</table>

Figure 2.5 Cummins' Quadrants applied to short texts

Text A (Quadrant 1) is a concrete story about everyday life, written in day-to-day language. The title clearly predicts the contents of the text and the bold print and capitals draw attention to important information. Few verb forms are used - mainly the simple past tense - and the verbs 'to have' and 'to be' are repeated. Words have mainly one or two syllables and the paragraphs and sentences are short.

Text B (Quadrant 2) is more specialised than Text A but not over-specialised. The verbs are mainly in the simple past tense, sentences are relatively short, and there is some repetition (*fire, skin)*. Words are mainly concrete.

Text C (Quadrant 3) uses dense language, long words, only full sentences and well-structured paragraphs. The article deals with a specialist subject. Paragraphs are not overlong. The title is popular but reflects the contents of the piece.

Text D (Quadrant 4) is one long paragraph and contains mostly formal language. The title only becomes clear after the text has been read. Many words are abstract, long and uncommon. Sentences are long and often complex.

5 LEVEL OF INPUT, OR COMPREHENSIBILITY

The level of input needs to be appropriate and comprehensible for learners. For the CLIL teacher, this means thinking about both content and language, which are interrelated. We use the term 'comprehensibility' to indicate how understandable language is. This is taken to include *'readability'*, which refers to understanding written text (e.g. course books), and *'listenability'*, which refers to understanding spoken language (e.g. the teacher's spoken input, video or audio material).

To encourage language acquisition, CLIL teachers should aim to provide content and language input which is comprehensible. The term *comprehensible input* is sometimes used to describe language input of a slightly higher level than the learners' present level (Krashen & Terrell, 1983). This idea is symbolised as i + 1, where i is the present language level.

Two aspects play a role in determining the comprehensibility of input. The first is the type and level of input: learners understand input if it is at the appropriate language and intellectual level. The second aspect is the experience and knowledge which the learner brings: their understanding is affected by factors such as their own personal interest in the subject and their knowledge and understanding of the topic.

Comprehensible subject input

It is easy to work with resources that deal with relatively simple concepts, require lower level thinking skills and assume that learners are already fairly familiar with the subject. Working through more difficult input (more academic, or containing abstract concepts) requires analysis, synthesis and deep thought. Based on their experience, CLIL teachers will often know instinctively whether the cognitive demands of a text are high or low.

Comprehensible language input

Easier language input often contains few new words, short sentences, short words, and words or forms which resemble L1 words or constructions. More difficult language input is dense, written in long, complex sentences using specialised vocabulary with long words. There are various ways for CLIL teachers to gauge the language level of input – these are listed in the next section.

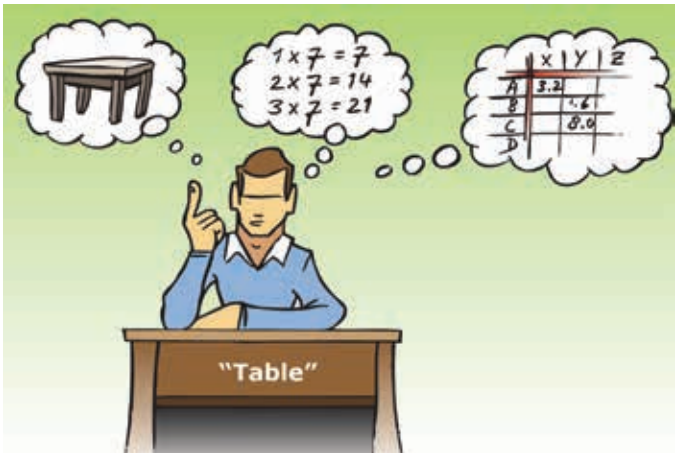
Advantages for CLIL teachers

Some items are actually easier for learners to comprehend in English classrooms than in regular Dutch classrooms. In chemistry, the abbreviations of the elements are usually more transparent in English than in Dutch: for example, O is the symbol for oxygen, which is *zuurstof* in Dutch. In Physics, f is the symbol for force, which is *kracht* in Dutch.

6 VOCABULARY AND COMPREHENSIBILITY

Even though a good native speaker reader recognises about 50,000 words, a vocabulary of only about 2,000 words is enough for a learner to recognise 80% of most texts. A vocabulary of about 5,000 words is enough to read and understand academic texts.

Vocabulary can be divided into three categories: *general vocabulary*, subject terminology and academic words. As shown in the following illustration, the same word (*table*) can have different meanings depending on whether it is used in everyday language, in subject language or in academic texts. CLIL learners need to learn and use words and phrases from each category.



General vocabulary refers to the most ordinary words used in everyday language; these are the social words you need to function on a day-to-day basis, such as *the, be, book,* and *table*. The *General Service List* (1995), a list of the 2,284 most frequent written words, can be found at jbauman.com/gsl.html.

Subject terminology is the specialised language for each subject, for example *molecule* in chemistry, *electromagnetic* in physics, *revolution* in history, *Hinduism* in religious education, *cell* in biology, and *multiplication tables* in mathematics. This is the language a subject teacher deals with naturally in a monolingual setting. Subject dictionaries and glossaries in textbooks are a good source for subject terminology.

Academic words are more formal English words commonly used in academic texts; words such as *adaptation, policy, stability,* and *voluntary*. These words are used in every subject. I good source is the Academic Word List (AWL; www.uefap.com/vocab/select/awl.htm), which divides them according to frequency into ten sub-lists. Sub-list 1 contains the most frequent academic words, such as *area, benefit, define, factor, environment, issue, research* and *vary*. Sub-list 10 includes less frequent words such as *adjacent, forthcoming, integrity, levy, notwithstanding, panel, persistent* and *so-called*. It is important for CLIL learners to recognise, understand and eventually use these words, as they gradually need to develop a more academic, formal language in order to move from BICS to CALP.

What is knowing vocabulary?
'Knowing' vocabulary is more than just recognising a word, or knowing how to pronounce it, and it is more than just reproducing a dictionary definition. Getting to really know words is a long-term process. It involves coming across words and phrases in different contexts. It means gradually using and recycling them so that they move from the *receptive vocabulary* into the *productive vocabulary*.

As well as recognising, understanding and eventually using words, learners need to know how words combine to make new ones (for example *star* and *fish* make *starfish*, and *book* and *worm* make *bookworm*). They need to know that some words combine together, sometimes in a particular order, such as *black and white* (but not *white and black)*, *heart attack,* and *take off*.

We cannot expect learners to be able to use words when they meet them for the first time; before they can do so actively and independently, we need to help them recognise words by recycling them in activities. Coming across words repeatedly and using them in different contexts or tasks is by far the best way of ensuring that they are learned (Nuttall, 1996).

Vocabulary difficulty

There are several aspects that can make vocabulary hard for learners:

- Words may have multiple meanings or may be used as different parts of speech; for example, the same word can be used as both a verb and a noun. Even if you know that a *dog* is our four-legged friend, you might not understand the sentence *These thoughts had dogged him for some time.* Another example is the noun *star* (heavenly body) which is also used as a verb *to star in a film* and as a noun for a reward: *She received a star for her essay.*
- Words may mean different things in everyday and subject-specific contexts, such as *force* or *mass*: in everyday language *force* means physical strength, whereas in physics it means a power that makes something move. Technical jargon can also prove difficult.
- Verbs can change their meanings when they become phrasal verbs. For example, *put* has completely different meanings in *to put across a point of view* and in *to put someone down*.
- In idiomatic language, the same word can have a literal and a figurative meaning. For example: *The grass was growing* (literal meaning) and *He was put out to grass* (figurative meaning).

7 LANGUAGE CHARACTERISTICS OF INPUT

A history teacher at a bilingual school contacted her colleague, an English teacher, during the first few weeks of term about her first year classes, with this request:

> Can you teach class 1TB the past tense, please? My book is full of past tenses and the children just don't understand them.

Figure 2.6 A history teacher's request

Each CLIL subject is concerned with its own content and language input, or 'discourse'. CLIL teachers often provide glossaries of specialised vocabulary for their subject. However, in addition to this specialised vocabulary, each subject also has its own characteristic language features. For example, the language of geography contains many prepositions and present tenses, the language of history is in the past tense right from the start, science subjects are often concerned with the language of hypotheses ('if' sentences), and physical education makes frequent use of imperatives. That is why it is useful for CLIL teachers to become aware of the language features that are often used in their subject area, so that they can help their learners notice these, too.

Formulating language aims

Once teachers have evaluated their material for its language characteristics, it can be useful to formulate language aims for a lesson: what should learners be able do at the end of the lesson or lesson series? Initially, it is useful to concentrate on only one or two essential language aspects.

Content	Language aims
Biology lesson on diseases cured in the 20th century	*Learners can complete a short paragraph with gaps about a deadly disease of their choice, explaining what caused it and how it was cured.*
Social sciences lesson on how adoption works.	*Learners can explain the steps involved in adoption in the first person and past tense, as if they were the adopted child.*
Economics lesson on NASDAQ, with video clip: videos.howstuffworks.com/howstuffworks/412-how-nasdaq-works-behind-the-scenes-video.htm	*Learners can understand the meaning of the most relevant words and phrases in the clip: 'NASDAQ', 'electronic stock exchange', 'matching engine', 'transaction bus', 'stocks', 'make a trade'.*

Table 2.7 Language aims

8 DIFFICULTIES CLIL LEARNERS MAY EXPERIENCE WITH INPUT

Learners of CLIL face particular challenges related to input, such as these:

"There are far too many difficult words in the texts and tests our history teacher uses. I just can't understand the texts because there are so many words I don't know and idioms and there are no photos. Some words seem to mean a lot of different things, too."

"I thought 'depression' meant feeling sad."

"I get the general idea of a text but can't answer the detailed questions our teacher sets."

"I'm having real trouble with geography and history. I think because there is so much reading and the texts are so long. In the other more practical subjects I get it much quicker."

"We just had to read a text on Sikhs in our religious education. What on earth has that got to do with me?"

"I found the first couple of years at my bilingual school a doddle and got high marks all the time. But now it's getting more difficult and I get stuck and spend ages at home trying to understand what I am learning."

"Sometimes there seem to be just too many new things to learn at once."

"I panic when I see words I don't understand, and stop reading."

"This sentence is really long and complicated. I just can't work it out."

Figure 2.7 Difficulties for learners with input

These quotes illustrate that CLIL learners may have difficulties with both *content* and *language* input, which probably influence each other.
Typical issues with understanding language include:

- looking for detail in a spoken or written text with many unfamiliar words;
- inferring information from spoken or written texts with few visuals;
- spoken text which is delivered quickly or in a heavy accent;
- unknown grammar;
- idioms, words with multiple meanings or figurative language;
- texts which include many reference words (*it, these, them, they*);
- very long sentences with many sub-clauses;
- passive sentences (e.g. *We have inflation when the money supply is increased faster by the government than the quantity of goods is increased*);
- everyday words used in a subject-specific way (e.g. *depression* in geography and history);
- the over-use of verbs as nouns (e.g. *the formation of crystals* instead of *we form crystals*);
- specialised subject-specific vocabulary and technical terms;
- understanding the relationship between main and sub-topics.

Typical issues with understanding ideas include:

- abstract concepts, for example black holes, DNA or the process of precipitation;
- content which is outside learners' experience, for example quadratic equations or British history;
- culturally-specific references, for example the significance of Bonfire Night and Guy Fawkes to democratic processes;
- algebraic calculations and describing these in words;
- putting a concept in context, for example placing a painter in a specific art movement;
- not being able to identify the main ideas in a text and going into too much detail.

APPLICATIONS IN CLIL

There are several ways to evaluate lesson input to see if learners are likely to understand it.

1 ESTIMATING LANGUAGE COMPREHENSIBILITY

How can teachers assess how much learners will understand of the language in their lesson input? Below are a number of issues for CLIL subject teachers to consider, followed by a commentary to help learners access the input better.

The amount of lesson input and visual support

How long is the input? How long are the paragraphs in a text? How long are the sentences? How much visual support does the input contain? What are the *language functions* of this material (e.g. does it describe, persuade or instruct)? Longer texts or videos demand more of a learner's understanding; shorter *chunks* of information are easier to follow. In texts, long sentences with many sub-clauses are difficult to comprehend. A text with subtitles, visuals or input divided into steps is easier to take in than one long, dense text consisting only of words.

Tips for dealing with the amount of lesson input and visual support

If you realise a topic is going to be difficult for your learners, choose input that is easy to divide into short chunks. Deal with the subject in smaller pieces; draw learners' attention to visuals, create visuals for a written text, or show a DVD.

Tenses and vocabulary

Which tenses are used in the material? The more complex or unfamiliar the tenses (e.g. passive or conditional tenses), the less accessible the input. How much new vocabulary is there? Which important vocabulary or phrases in the material do learners need to recognise and use? How long are the words? The more new vocabulary there is in the input, the harder it is to follow. One-syllable words are generally easier to understand than those made up of several syllables.

Tips for dealing with tenses and vocabulary

Think about whether the learners will understand the tenses in the input. For example, do they understand regular and irregular verb forms? Point these out or design activities to help them process new forms.

In written text, count the number of words per page. A rule of thumb is that 10-15 new words or about 5% of the words per page is enough – go above this and learners will have difficulties gaining a detailed understanding of the ideas in the text. Decide in advance which words learners really need to know beforehand, and only pre-teach *keywords* which, if unknown, would limit their understanding on a first read. Encourage learners to guess the meanings of words by looking at them in context, or at the form of words (e.g. prefixes such as *un-, in-, dis-* indicate opposites).

2 WORKING WITH VOCABULARY

Here are some general suggestions for dealing with vocabulary when providing lesson input:

- Provide a photo, video or diagram of important concepts, so that learners can understand the meaning through a different medium.
- Teach words in themes, so that learners understand the links between them. For example, use mind maps to illustrate the connections between words or ask learners to make their own.
- Provide easy (frequently used) synonyms for the words.
- Use body language or acting out to explain.
- Make a link to a word or concept in another language.
- *Pre-teach* important concepts or key words. Make sure that you do not pre-teach too much: a handful of the most important concepts is enough.
- Provide tasks to actively involve learners with new vocabulary. For example, encourage them to think about what type of word it is (noun, verb, preposition), to look at the text around the word for clues to its meaning, to look at the form of the word (e.g. *-ed* at the end of a word indicates a regular past tense, *-ful* at the end of a word usually indicates an adjective or describing word). The more learners are engaged with the vocabulary, the more likely they are to recall it.
- When working with vocabulary for abstract concepts, give learners concrete examples.
- Compare new concepts with ones that learners already know: link older knowledge with the new.
- Help learners develop reading strategies by blanking out the new vocabulary or key words to see if they can understand a text without these (see classroom activities 22 and 26).

3 GLOSSARIES

Many teachers provide word lists, which learners collect in a notebook or word file, otherwise known as a *glossary*. A *Personal Idiom File* (PIF) is a glossary created by the learners. To support learners best, it helps if the whole CLIL team decides on a strategy for the glossary or PIF, and uses it consistently. Learners should be provided with words and definitions in English for a glossary as well as a clear example of the word or phrase in a context where the meaning of the word is clear. For example: The **eye wall** of a hurricane is the area around the eye with the fastest, most violent winds. Learners can also illustrate the definitions with drawings or photographs. The more learners are involved in creating their own glossaries, the more likely they are to retain the words they are working with.

It is vital that the words do not only remain in the glossary, but that learners use them actively in different tasks. Merely learning words by heart for a test does not help learners retain vocabulary in the *long-term memory*: reading a lot is much more effective. For this reason, make sure you provide tasks or activities which recycle the words so as to help learners to retain vocabulary.

4 INPUT ORGANISATION

How well-organised is your input? Some writers organise their ideas more clearly than others, for example by using '*signal words*' such as *first(ly), second(ly), next, finally* or, in spoken language, by using phrases like *I have three points to make* or *Some scientists are in agreement with this theory, others disagree*. Writers may

also structure their paragraphs by arguments for and arguments against a certain statement. Texts with clear patterns are easier to follow.

Tips for looking at organisation
When you look for material, be aware that a well-organised text will be easier to process than a rambling one. Provide tasks to help learners understand the function of input: Why was this text written or why was this film made? Who is the audience? Help them become aware of the functions of parts of a text, for example by asking questions such as *What are the arguments for and against? How do you know that?* or *In which parts of the text does the author discuss the causes and effects?* Help learners to recognise and use words which show the organisation of a text.

5 MEASURING READABILITY

It is possible to determine the 'readability' of a text, or roughly how many words in a reading text are unfamiliar to the readers. The rule of thumb previously mentioned is that no more than 10-15 words, or about 5% of the words on a page, should be unfamiliar. The more scientifically-minded reader may like to measure the readability of a written text on the internet. An online readability test can give a rough indication of the readability of a (digital) text for a native speaker. A good online readability instruments can be found here: http://www.online-utility.org/english/readability_test_and_improve.jsp

We checked two texts with this online instrument - an article from the Guardian newspaper and one from a BBC website for children:

Send fewer to jail, Straw urges courts
Jack Straw, the justice secretary, last night made an urgent appeal to magistrates to send fewer people to jail as the prison population in England and Wales soared past 82,000 to an all-time high.

The official prison population reached 82,006 yesterday - just 21 places short of the system's official capacity - fuelled by a jump of 2,300 in prisoner numbers since the new year.
In an exclusive interview with the Guardian, Straw said the numbers were already outstripping official forecasts that were only published in December, and added that he could not rule out a further extension to the early release scheme that has seen thousands released 18 days before the end of their sentence. [...]

(Source: The Guardian online
www.guardian.co.uk/society/2008/feb/22/prisonsandprobation.justice)

Readability results
The test indicated that this text is at grade 16 level (that is, about vwo 5) and that its readability is 30% (the lower the score, the more difficult the text).

Girl, 16, now has SEVEN children
A 16-year-old South American girl now has SEVEN children after giving birth to her second set of triplets.

The girl had a son when she was 14. She had her first set of triplets - all girls - when she was 15.

Her newest arrivals are all females as well. They were born earlier than expected, but doctors say the babies and their mother are doing well.

The girl, who has been named only as Pamela, comes from the town of Leones in Cordoba, central Argentina.

(Source: Newsround CBBC website:
news.bbc.co.uk/cbbcnews/hi/newsid_7250000/newsid_7258200/7258272.stm)

Readability results
The test indicated that this text is at first year level, and that its readability is 71% - much easier than the Guardian text.

6 THE COMMON EUROPEAN FRAMEWORK OF REFERENCE FOR LANGUAGES

To gauge how understandable input is for learners, the Common European Framework of Reference for Languages can be another useful tool. The CEFR is a guideline used Europe-wide to describe the achievements of learners of foreign languages. It describes the reading, listening, spoken production, spoken interaction and writing skills of learners, divided into six levels: A1, A2, B1, B2, C1 and C2. A1 is the lowest level and C2 the level of a near-native speaker. A copy of the one-page English version of the CEFR can be found in the Appendix.

The Cambridge examinations often taken at Dutch CLIL schools, according to the University of Cambridge ESOL Examinations, are at approximately these levels on the CEFR:

Examination	**CEFR**
First Certificate of English (FCE)	Level B2
Cambridge Advanced English (CAE)	Level C1
Cambridge Proficiency of English (CPE)	Level C2

Generally speaking, when learners start out at a non-bilingual Dutch *vwo*, they are at level A1 or A2. By the end of the *vwo* curriculum, they are required to have reached level B2 for English. Dutch bilingual schools (tto) will probably expect a level of B2 by the end of year 3 and C1 by the end of year 6. As this chapter deals with lesson input, the most relevant sections for this chapter are listening and reading.

The CEFR *descriptors* describe the learners' abilities for each level and each of the language skills. These are the CEFR descriptors for reading at level B1 and C1.

B1	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.
C1	I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialised articles and longer technical instructions, even when they do not relate to my field.

How the CEFR can help provide appropriate input

There are two ways in which the CEFR can help CLIL teachers provide language input at the appropriate level (i + 1) for their learners. Firstly, teachers can assess their own and their learners' level of English with the CEFR by using the descriptors. For learners, it can be an eye-opener to assess themselves in this way. A useful online tool for this is the European Language Portfolio (Dutch and English versions can be found at www.europeestaalportfolio.nl).

Secondly, the level of input can be assessed. Teachers at one bilingual school were astonished to discover that learners would need to be at level B2 to understand their first year course book (written for native speaking learners). The starting level of their learners was A2. No wonder they were having great difficulty understanding and working with the texts provided! Teachers can use the CEFR to assess the level of the input of their materials by asking themselves the question: "Which CEFR level does a learner need in order to understand this written or spoken material?"

The following examples present texts at B1 and C1 level, together with an analysis by Texamen *(http://www.texamen.nl)*, a private company that combines the CEFR levels and readability criteria to grade texts.

6 B1 text

Fire Making

Many thousands of years ago, people lived only in hot countries. They did not live in cold countries because they could not keep warm. Then they learned how to make clothes. When an animal was killed, they cut off its skin. They wrapped the skins around their bodies. The skins kept them warm.

At first men did not know how to make fire. Sometimes lightning hit a forest and started a fire. The people took some of this fire to make a fire near their homes. A fire was very important for three reasons. It kept them warm. It frightened wild animals. They did not attack when they saw fire. Then another thing was discovered: if you cook food, it tastes much better!

Analysis

The word use of the text is neither specific nor general (*discovered, countries*), but nonetheless concrete (*skin, animal, homes*) and frequent (*frightened*). The language use is neither informal nor formal. At B1, a text may contain expressions and figurative language, such as *to keep warm*. The number of words (123), sentence length (9.46 words per sentence) and paragraph length (6.5 sentences) correspond with the range of B1 given by Texamen®.

7 C1 text

The Climax of Humanity (excerpt)

Looking beyond the blinking lights and whirring gizmos, though, the new century is shaping up as one of the most amazing periods in human history. Three great transitions set in motion by the Industrial Revolution are reaching their culmination. After several centuries of faster-than-exponential growth, the world's population is stabilising. Judging from current trends, it will plateau at around nine billion people toward the middle of this century. Meanwhile extreme poverty is receding both as a percentage of population and in absolute numbers. If China and India continue to follow in the economic footsteps of Japan and South Korea, by 2050 the average Chinese will be as rich as the average Swiss is today; the average Indian, as rich as today's Israeli.

Analysis

The word use is very specific (*whirring gizmos*), abstract (*transition*) and low frequency (*culmination, climatologists*). The language is formal. It contains several expressions (*judging from*), figurative language (*economic footsteps*) and jargon (*carbon dioxide*). The sentence length (18.18 words per sentence), the word length (5.03 characters per character) and the Lix Measure (46.25) correspond to the range Texamen® appoints to C1 texts.

7 ADAPTING LESSON INPUT

Another way to help learners understand input is to adapt it. Here, we deal with two ways in which teachers can do this: by simplifying the language or by visualising information.

Simplifying language

Below are some suggestions about how to simplify a written text, illustrated with examples.

Method of simplification	Original text	Simplified text
Replace a difficult title with a short, simple title which reflects the contents of the text	Sources of radiation	Where does radiation come from?
Put the main idea at the start of the text and each paragraph	In 1972 a detailed survey was made of average annual whole-body doses to the U.S.A. population from various sources.	Radiation exposure is how much radiation a person receives
Add paragraph subtitles	No subtitles	Survey Conclusion
Remove unnecessary words or information	remember, some people got enough to make up for the vast majority who got none!	--
Divide long, compound sentences into two or more, and make short sentences which include only one idea (10-15 words maximum) and a simple sentence structure: verb + subject + high frequency words	Occupational and miscellaneous artificial exposures averaged about 1-2 *mR/y* (…) global fallout from nuclear testing made up about 6 *mR/y*; medical exposures (X-rays, radiotherapy, etc.) were good for nearly 100 *mR/y;* and natural background averaged about 120 *mR/y*.	The survey showed that the average radiation exposure at work and from other various sources about 1-2 *mR/y* (milliRöntgen per year). The radiation from the fallout from nuclear testing was about 6 *mR/y*. Medical exposure (X-rays, radiotherapy) was nearly 100 *mR/y* and natural background radiation was about 120 *mR/y*.
Change passive tenses into active ones	a detailed survey was made	a survey in the U.S.A. looked at
Change phrasal verbs to simpler ones	global fallout from nuclear testing made up about 6 *mR/y*	the fallout from nuclear testing was about 6 *mR/y*
Replace metaphors or idiomatic language with more concrete language	Although this begs the question of 'extraordinary cases'…	This may lead us to ask: what about 'extraordinary cases' …

Table 2.8 Ways of simplifying a text

A few more tips:

- add steps or a logical chronology, using bulleted paragraphs or words like *Initially/ first, … next/later/ secondly, …last/finally/at the end*;
- use large print or add white space; double space a difficult paragraph;
- make text more visual: add non-linguistic support such as a diagram or illustrations.

8 Simplified text

Here is an example of a short original physics text and its simplified version.

1 Original text

(adapted from musr.physics.ubc.ca/~jess/hr/skept/RadHaz/node8.html)

Sources of Radiation

In 1972 a detailed survey was made of average annual whole-body doses to the U.S.A. population from various sources. Occupational and miscellaneous artificial exposures averaged about 1-2 *mR/y* (remember, some people got enough to make up for the vast majority who got none!); global fallout from nuclear testing made up about 6 *mR/y*; medical exposures (X-rays, radiotherapy, etc.) were good for nearly 100 *mR/y*; and natural background averaged about 120 *mR/y*. The numbers have not changed much in the intervening years. One must conclude that for the average person there are only two significant sources of radiation exposure: medical and natural. Although this begs the question of 'extraordinary cases' who receive larger exposures in accidents such as Chernobyl, it still helps to set perspectives for those examples.

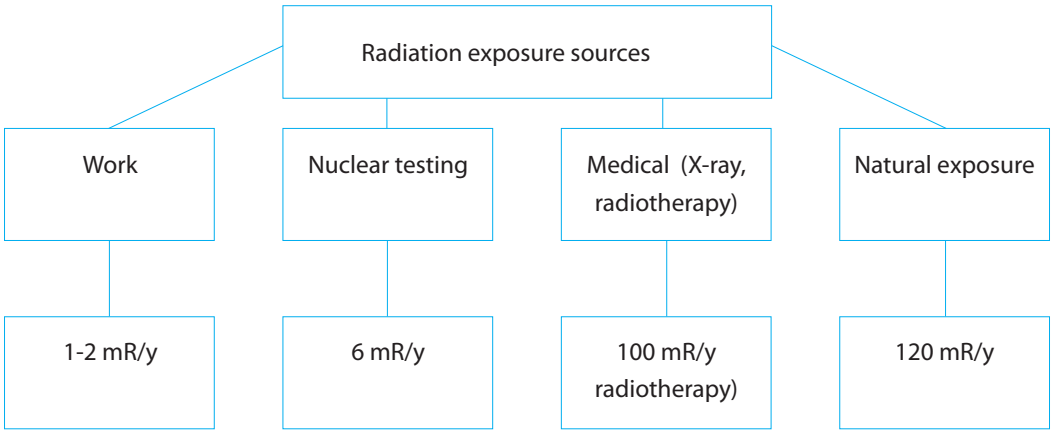
2 Simplified text

Where does radiation come from?

Radiation exposure is how much radiation a person receives.

Survey

In 1972, a survey in the U.S.A. looked at the average amount of radiation that people received in a year from various sources. This was measured in *mR/y*, milliRöntgen per year. The survey showed that the average radiation exposure at work and from other various sources about 1-2 *mR/y* (milliRöntgen per year); the radiation from the fallout from nuclear testing was about 6 *mR/y*; medical exposure (X-rays, radiotherapy) was nearly 100 *mR/y* and natural background radiation was about 120 *mR/y*. This information is still true today. The survey results are presented below:



Conclusion
We must conclude that for the average person there are only two significant sources of radiation exposure: medical and natural. This may lead us to ask: what about 'extraordinary cases' who receive a lot of radiation exposure, in accidents such as in the nuclear plant at Chernobyl? These cases should be put in the right perspective, and this conclusion helps us to do it.

CONCLUSION

It is vitally important that teachers provide lesson input at the appropriate content and language level for their learners, and that they guide them to understand the lesson input. The input can be provided in different ways, such as using visual, auditory or written media. The CEFR and online readability instruments are useful evaluation tools to ensure that learners are likely to understand the various types and different levels of lesson input.

When providing lesson input, CLIL teachers can:

- offer multimodal input through various channels: reading and listening texts, videos, photos, hands-on activities and objects;
- select or adapt input so that the textual and visual input support each other;
- use different kinds of input for different purposes;
- use Cummins' Quadrants to help estimate whether the input is at the appropriate academic and language level.
- offer comprehensible input;
- help learners recognise, understand and eventually use vocabulary actively;
- help learners make and refer to glossaries in English;
- divide long pieces of input into shorter pieces;
- support learners in *noticing* and understanding language features of different texts;
- choose and use written texts which do not contain more than 10-15 unknown words per page;
- simplify difficult texts for detailed work;
- visualise a text;
- create opportunities for students to receive input outside the classroom, for example via the Internet, television, film, newspapers, personal experiences and social exchanges;
- use the CEFR to evaluate the language level of input; make input easier or more difficult by shifting one level up or down; design tasks with the CEFR in mind;
- formulate language aims as well as content aims for lessons.

5 Teacher development: evaluating input

1 Use Table 2.1 about different kinds of input. Which kinds of input do you use? Select one you do not use and search for appropriate materials to try it out in the classroom.
2 Use the CEFR to assess the level of the course books you use. Choose three different texts in a book and assess their level, or choose three texts from three different course books. Are they all at the same level? If not, can you explain why?
3 Analyse a text you intend to use in class. Which new words will learners need to use actively? Which new words will learners need to understand but not really use? Which words can learners ignore?

PRACTICAL LESSON IDEAS – EVALUATING INPUT

17 FINDING MATERIALS ONLINE

Provide varied resources and materials for input.

A Smart Board, computer room or data projector linked to a computer provides a great opportunity for providing varied online input. Here are some of our favourite resources for varied input.

Video clips
YouTube: www.youtube.com
This well-known site offers short video clips on many subjects. A search for 'great depression' reveals some vivid photographs from the time of the great depression, backed by music from that period (e.g. 'This land is my land'). A search for 'chemical reactions' produces a motivating educational video on alkali videos with chemicals exploding in a bath.

Spoken text
iTunes: www.apple.com/itunes
The iTunes store has free downloadable podcasts of great speeches in history, such as Martin Luther King's 'I have a dream', or J.F. Kennedy's inaugural speech. There are many podcasts on historical, scientific or cultural topics, too.

Educational documentaries
TeachersTV (available from http://www.schoolsworld.tv/videos/ and other sites)
TeachersTV offers a wealth of educational documentaries. These have been categorised by subject (English, ICT, maths and science) and level (primary or secondary school).

Written and spoken input
How Stuff Works: www.howstuffworks.com
This site is a goldmine of information on many school topics, with clearly-written texts backed by visual material such as photographs and videos.

Online news resources
Many teachers like to link their work in the classroom to topical subjects. Try using:

- CBBC Newsround: news.bbc.co.uk/cbbcnews/default.stm
- Guardian online: www.guardian.co.uk
- BBC World Service: www.bbc.co.uk/worldservice
- BBC: www.bbc.co.uk
- Kidon Media-Link: http://www.kidon.com/media-link/index.php
- BBC Learning: www.bbc.co.uk/learning

Visuals
Google Images: images.google.nl
Use Google images to find photographs or other visuals for your lessons. The larger the image, the better the quality. For example, pictures measuring 400 x 300 pixels are not as good as ones that are 600 x 800. Through Advanced Search, you can further refine your search (cartoons, black-and-white only, etc).

Google Earth: earth.google.com
"Google Earth lets you fly anywhere on Earth to view satellite imagery, maps, terrain, 3D buildings and even explore galaxies in the Sky. You can explore rich geographical content, save your toured places and share with others".

Lyrics
Lyrics search engines: www.metrolyrics.com or www.azlyrics.com
Although heavy with advertisements, these sites provide lyrics to most well-known songs.
Songs for teaching: www.songsforteaching.com
Here you can find songs for different school subjects.

18 GRAPHIC ORGANISERS

Help learners organise and understand new vocabulary or concepts.

Provide a note-taking structure - or graphic organiser - for learners to complete as they work with the input. For more difficult input, you can provide partially-completed organisers which learners complete further.

A good website to start is http://www.teachingenglish.org.uk/think/articles/graphic-organisers

19 USING PICTURES AND ASKING QUESTIONS

Support texts with visuals or hands-on activities.

Select a visual - a photograph, cartoon or other image - which is strongly related to your topic. Then create a task around the visual to introduce your learners to the lesson topic and get them talking. Make sure that all the learners can see the visual. You might use a list of questions, a pile of cards with questions, or a mind map to complete. First ask the learners to think about it in pairs, and then discuss some ideas together in plenary.

Physics: radiation

When showing an image of people wearing a hazmat suit (garment worn for protection against hazardous substances), you could ask the following questions:

What, where and when?

What is the photo of?

Where was the photo taken?

When (time of day, or year) was the photo taken?

Write down two questions you would like to ask about the photo.

Think of a catchy title for the photo.

Who?

Who is in the photo?

What are the people doing in the photo?

What are they wearing/What do they look like?

What is the relationship between the people in the photo?

Who is the photographer?

Why?

Why do you think the photograph was taken?

Who or what event was the photograph taken for?

What is the photographer trying to convey to the viewer?

In-depth

If this photo was the cover for a book, what would the title of the book be?

If it were a CD cover, what kind of music would it be?

What might the title of the CD be?

If the photo was illustrating an article, what would the title be?

What do you think the message of the photo is?

20 INTERVIEW

Encourage spoken input.

Before you start a topic or provide some input, ask your learners to interview a person or people (preferably in English) about the topic. For example, they might interview a grandparent, elderly relative or neighbour about their experiences during the war, or an acquaintance about their job or thoughts about a topic in the news.

History: World War II

Provide an interview framework like the one below, ensuring you leave enough space for learners to enter the answers. Learners can also create their own framework.

Interview framework about the Second World War

First, ask your interviewee if you may ask them some questions about themselves and their experiences during the war. Write the answers to their questions on this form.

My name _____

Name of person I interviewed _____

Date of birth of person I interviewed _____

Date _____

Interview Questions

1 What did you think when the war started?
2 How old were you during the war?
3 Where did you live during the war?
4 What was your house like?
5 What did you do in the war?
6 What was music like during the war?
7 What did your parents do in the war?
8 What was the worst thing that happened to you during the war?
9 How did you feel when the war ended?
10 How have things changed for the better since the war?
11 How have things changed for the worse since the war?
12 (Write your own question here and ask it)
13 (Write your own question here and ask it)

21 HANDS-ON EXPERIMENTS OR EXPERIENCES

Support texts with visuals, hands-on activities or experiments.

Visualise your content with real objects, hands-on experiments or experiences. In this way, learners can reinforce their learning through a non-linguistic channel. Concrete vocabulary can be visualised through objects, and an experiment carried out at the start of a lesson can aid later understanding

For some ideas, see:

- Hunkin's experiments: www.hunkinsexperiments.com
  This site describes experiments which you can do at home.
- Steve Spangler's Science: http://www.stevespanglerscience.com/experiments
  Scroll down to find free experiments.

22 MIND THE GAP

Make a gapped text.

Select a dozen or so important words from your input which you would like learners to understand and eventually use. Make a gapped text (cloze test) of your input, providing the words to fit into the gaps. Ensure the gaps are numbered for easy reference later and that they are not too close together, so that learners can use the context of the text to guess the words. You can make it more difficult by providing extra words which do not fit the text, or easier by providing dictionaries. This task actively engages learners with the important concepts of a unit.

Technology: how SMS works

Below is an excerpt from a text entitled 'How SMS Works' (adapted from communication.howstuffworks.com/sms.htm). There are 10 numbered gaps in the text. Can you complete the gaps with 10 of these words?

SMS text messaging cell phone sending cell phones text message characters short message service handling cells control channel receiving

Introduction to How SMS Works

Just when we're finally used to seeing everybody constantly talking on their _1 _____ it suddenly seems like no one is talking at all. Instead, they're typing away on tiny numerical pads, using their _1 _____ to send quick messages. SMS, or _ 2 _____, has replaced talking on the phone for a new "thumb generation" of texters.

In this article, we'll find out how text messaging works, explore its uses and learn why it sometimes takes a while for your
_ 2 _____ to get to its recipient.
SMS stands for _ 3 _____. Simply put, it is a method of communication that sends text between _1 _____, or from a PC or handheld to a cell phone. The "short" part refers to the maximum size of the text messages: 160 _ 4 _____ (letters, numbers or symbols in the Latin alphabet). For other alphabets, such as Chinese, the maximum SMS size is 70
_4 _____.
But how do _ 5 _____ messages actually get to your phone? [...] Even if you are not talking on your cell phone, your phone is constantly _ 6 _____ and _7 _____ information. It is talking to its cell phone tower over a pathway called a _ 8 _____ .
The reason for this chatter is so that the
_ 9 _____ system knows which cell your phone is in, and so that your phone can change
_10 _____ as you move around. Every so often, your phone and the tower will exchange a packet of data that lets both of them know that everything is OK.

Key: 1. cell phones; 2. text message; 3. short message service; 4. characters; 5. SMS; 6. sending; 7. receiving; 8. control channel; 9. cell phone; 10. cells

23 WORD CARDS 1

Help learners understand new words through categorising.

Before you provide input, copy 20-30 words related to your input onto as many cards. The words should be related to three or more sub-topics. Give a set of cards to a pair of learners and ask them to categorise the words according to the sub-topics. This will help them (and you) to see which words they already recognise and understand and which are new.

Biology: bones, organs and other parts of the body
Bones: clavicle, skull, scapula, humerus, radius, cranium, spine, femur, patella, sternum
Organs: heart, stomach, kidneys, intestines, skins, lungs, pancreas, kidney, liver, eye
Other parts of the body: quadriceps, oesophagus, throat, triceps, windpipe, platelets, gluteus, anus, vein

Chemistry: divide words into the three categories of liquids, gasses and solids.

24 WORD CARDS 2

Help learners to recognise and understand vocabulary.

This activity should be used with input that uses many word combinations or collocations.
Put one half of each collocation on a coloured card, and the other half on a different-coloured card. Mix the cards up. Give each group of learners two sets of cards. They then try to find the correct collocations. Once they are done, they can guess the topic of the lesson that is to follow.

Biology: health

Pink cards	**Blue cards**
black	eye
sprained	ankle
allergic	reaction
heart	attack
heart	beat
blood	pressure

25 SPOT THE WORDS

Help learners to notice language.

Make a list of verbs, nouns or adjectives. Add six words which are not in the same category.
Ask learners to find the words which do not belong to the category.

Biology: endangered animals

An adjective is a word that describes a person, animal, place, thing or idea. Adjectives modify or 'give more information' about nouns, e.g. a *beautiful* dog. Which of the following words are *not* adjectives?

Cross out these non-adjectives and add more adjectives of your own.

spotted	lovable	quick	moist	territorial	ears
furry	vicious	warm-blooded	cute	dry	shiny
long	wild	cold-blooded	adorable	shy	small
striped	tame	heavy	rough	dominant	large
deadly	diurnal	aggressive	scaly	submissive	nocturnal
soft	hairy	wings	patterned	maternal	cat

26 MAKE A GAPPED TEXT

Help learners develop reading strategies.

To help learners develop reading strategies, blank out the new vocabulary or keywords in a text and see if they can understand without these.

Science: cloud in a bottle

Cloud in a bottle: How does it work?
(Adapted from www.stevespanglerscience.com/experiment/00000030).

Even though we don't see them, water molecules are in the air all around us; it's called water _1 _____. When the molecules are _ 2 _____ around in the atmosphere, they don't normally stick together.

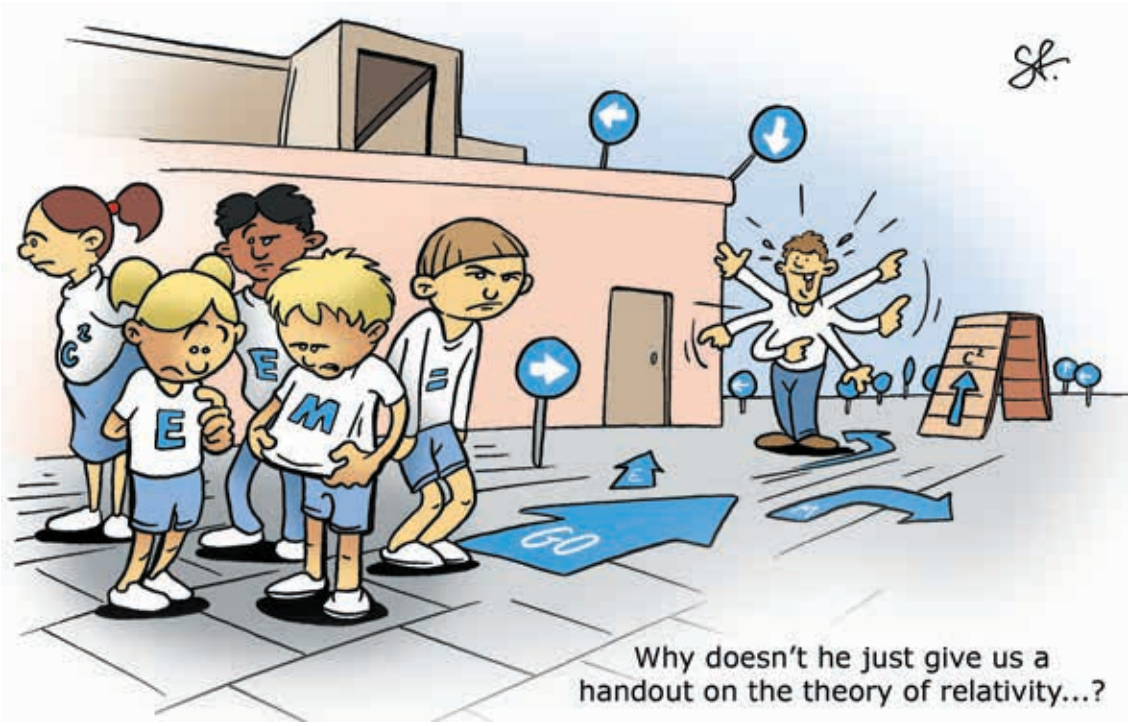
Squeezing the sides of the bottle forces the molecules to squeeze together or _ 3 _____. Releasing the pressure allows the air to _ 4 _____, and in doing so, the temperature of the air becomes cooler. This cooling process allows the molecules to stick together more easily forming tiny _ 5 _____ and clouds are nothing more than tiny water _ 5 _____! The smoke in the bottle also helps this process. Water particles will group together more easily if there are some solid particles in the air to act as a _ 6 _____. The invisible particles serve as the _ 6 _____ and help in the formation of the cloud. Clouds on Earth form when warm air rises and its pressure is reduced. The air _ 7 _____ and cools, and clouds form as the temperature drops below the _ 8 _____ point. The invisible particles in the air may be in the form of pollution, smoke, dust or even tiny particles of dirt.

The blanked-out words are:

1	vapour	5	droplets	
2	bouncing	6	nucleus	
3	compress	7	expands	
4	expand	8	dew	


3

3 Guiding understanding for CLIL



This chapter covers:

- ways of guiding understanding (*processing input*) to support understanding in CLIL;
- what processing input is;
- why processing input is important for CLIL, in terms of both content and language;
- practical CLIL classroom activities to guide learners in understanding and working with input.

INTRODUCTION

Texts, formulas, videos, diagrams, graphs, experiments: CLIL teachers guide learners to understand many types of input in English. This chapter deals with guiding understanding - or processing input - in English. Processing input is the action of working actively with input - your basic materials. Some examples of processing input are: a geography teacher asking learners to make a graph out of raw data or data in a text; a history teacher making a handout for learners to identify the causes and effects of an event in a text; a science teacher asking learners to draw conclusions about an experiment they have done. Processing input helps learners to understand it better. Consequently, learners learn, remember and apply input better, in terms of both content and language.

6 Alternative ways of supporting understanding

Here are some different ways in which teachers can help learners to process input. For each example, write down one possible alternative. One alternative has been provided.

Subject input	Example	Alternative way of supporting understanding
Music: video from YouTube about Beethoven's life	List of questions about the content and images of the video clip.	A worksheet of an empty timeline which shows the chronology of Beethoven's life.
Economics: population density	A shaded (coloured in) map about population density in Africa with a list of questions.	
Maths: algebra	Teacher explanation about algebraic symbols.	
Physical education: areas of fitness	A text about suppleness, strength and stamina. A list of true and false statements about areas of fitness.	
Chemistry: a video clip about sedimentation and soils	Each learner is provided with one red and one green card. After the learners have watched the video, the teacher reads out true and false statements about the contents of the video. If learners agree, they hold the green card up; if they disagree, they hold the red card up.	

Table 3.1 Your experience with guiding understanding

CASE STUDY

Here is a description of the next part of the history lesson described in Chapter 2. The lesson is aimed at first-year CLIL learners (12/13-year-olds). The input consists of illustrations and extracts about the lifestyle and ways of warfare that Romans encountered in Britain and the Netherlands.

Content aims

At the end of the lesson, learners can:

- find specific information in a text in order to understand some characteristics of lifestyle and warfare in Britain and the Netherlands in Roman times;
- assess the reliability of source material.

Language aims

At the end of the lesson, learners can:

- write clear notes;
- use words related to lifestyle and warfare;
- argue their own point-of-view about the reliability of the input.

"To help them understand this input, I asked the learners to skim all the extracts and illustrations and decide which described lifestyle and which warfare. I then gave each learner two A4 sheets of card: blue for warfare and yellow for lifestyle. The learners' second task was to cut up the texts and illustrations, and paste all those dealing with LIFESTYLE on the yellow piece of cardboard, and all those relating to WARFARE on the blue one. In their third task, I asked learners to work in pairs and complete a table summarising the information about lifestyle and warfare from their chosen texts. In the next task, I asked them to consider the reliability of the extracts' authors: *Was the information objective or subjective?* We then discussed a glossary of important items for explaining the specific jargon used in the texts: *ambush, casualties, deploy troops, missiles, rampart, tribune, cuirasses.*"

Figure 3.1 Teacher's comment

Text or illustration	**Lifestyle**	**Warfare**	**Reliability of source: objective or s ubjective? Why?**
Examples: source 5	-	Cantabri soldiers would commit suicide rather than become slaves	Objective because it tells facts.
Source 7	Britons didn't farm and couldn't make cheese from milk	-	Objective because we know Britons didn't farm then.

Table 3.2 Table to note down information about lifestyle and warfare

WHY IS THIS CLIL?

The processing of input in this lesson supports learning of content and language in several ways:

The teacher first provides a relatively easy reading task for global understanding (*skimming*): an exercise to check comprehension. This requires some basic processing of information. It gives the learners a chance to familiarise themselves with the main ideas in the text and encourages them to read globally, ignoring words that they do not know.

Having been given a second, slightly more difficult, sorting task, learners then read the material. This cutting and pasting requires them to re-organise the resources, or input, in a physical way and thus helps them to gain a greater overall understanding. Learners are not yet required to produce *output* independently. During this task, they process more of the information. Again, they are encouraged to read for general meaning and ignore or guess words that they do not yet know.

Next, the teacher provides a third and more challenging task in which learners work on warfare and lifestyle in more detail by note-taking in a table with specific information from the texts. The learners are now producing a small amount of output.

Throughout the lesson, different tasks ensure that the new input - information and language - is recycled. Thinking skills are also tapped into: learners need to sort out relevant points from their resources in the initial task, re-formulate the information and decide on its reliability.

BACKGROUND AND THEORY

In this section we discuss some key ideas relating to processing input: its importance for CLIL, vocabulary and memory, and *scaffolding* and the zone of proximal development, or ZPD.

1 WHY IS PROCESSING INPUT IMPORTANT IN CLIL?

There are four main reasons why processing input is important. First, if learners re-organise or change input into another form, they will process and comprehend input better. Tasks for guiding understanding might include, for example, changing information from a diagram into a text, or from a text into a picture or role-play. Such tasks require higher thinking skills.

Second, if learners are helped to 'scaffold' their learning to understand the main points, the lesson input will be understood better. This can be done by using *graphic organisers* or 'frames' or by effective teacher questioning. Explanations of scaffolding and examples of graphic organisers and frames will be given later in this chapter.

Third, the more multimodal - or varied - the way of processing the input is, the more likely it is that more learners will understand it in their own way. For example, if teachers offer tasks with pictures, photographs, diagrams, videos or other visuals, a greater number of learners is likely to understand both content and language better. After all, each individual takes in information in different ways.

Finally, if tasks are made meaningful and relate to real life - through *personalisation* - learners will create more of their own links with what they already know and can do.

Processing input in a second language

In CLIL, learners need to process content through a second language, so actively processing the input is more challenging for them than when they are learning through their first language. The number of associations they have in their first language is much greater than in the second language. When teachers provide processing activities or tasks, these help the learners create more connections in the brain about

the content in English. This helps the learners to remember, and retrieve both the language and the information when they need it.

2 VOCABULARY AND MEMORY

One important way in which subject teachers work with language input is through vocabulary - the words or phrases which are needed for understanding. But how do learners store the vocabulary in their memories? Recent neurological research says that knowledge is stored in the brain as a pattern of networks (Moonen, 2008, p. 30). Processing in the brain is needed to add words to these networks. Some of the words learners come across go into their working memory: which words these are depends on motivation, learner preferences, mood and openness. Not every learner will put the same items into their working memory at the same time! Once in the working memory, the new vocabulary can be processed through tasks. The more processing there is, the more connections are made between new words and words which have already been stored in the memory. In this way, the vocabulary is more likely to enter the long-term memory and join a network of associations in the brain. Therefore, teachers need to work actively with vocabulary in their lessons.

CLIL teachers need to help learners create more and stronger connections in the brain, or in other words, to recycle the vocabulary. Learners need to use it in different contexts and through different channels: a variety of tasks and language skills. This forges stronger connections in learners' brains, which helps them remember and re-use the vocabulary.

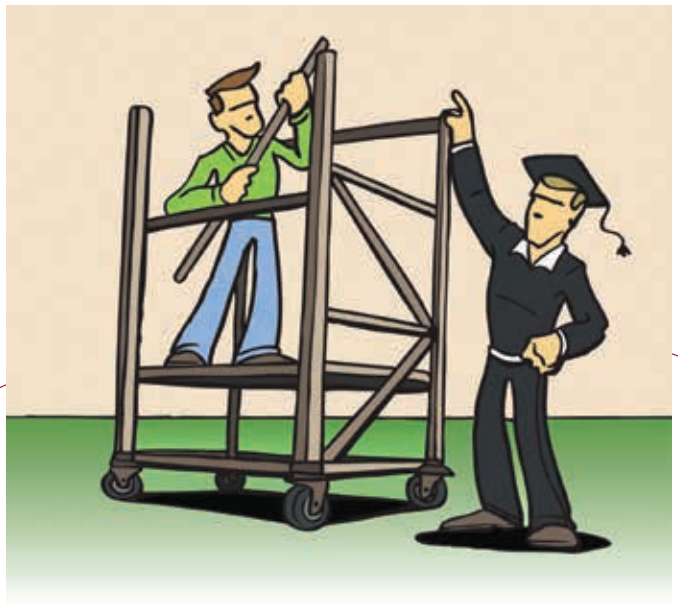
In short, teachers must do much more than providing lists of definitions of English words in Dutch. Learners need to recognise, store and eventually retrieve and use vocabulary. When learners see or hear vocabulary in several different contexts, they will gradually start using the words in new contexts for themselves.

Three types of vocabulary

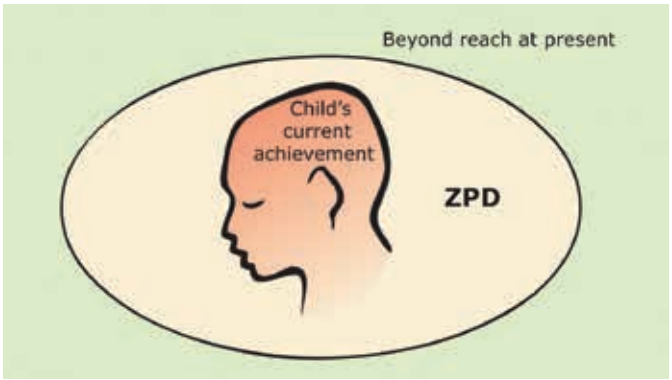
As explained in Chapter 2, there are three basic types of vocabulary: general vocabulary, subject terminology and academic words. It is likely that subject teachers will be dealing mainly with subject terminology: the words specific to their subject, such as *cone* in mathematics, *inflation* in economics and *ecosystem* in biology.

3 SCAFFOLDING AND THE ZONE OF PROXIMAL DEVELOPMENT (ZPD)

A relevant view of learning through processing input relates to the importance of teacher *scaffolding*. This is based on the ideas of Wood, Bruner & Ross (1976) and Vygotsky (1978). Builders use temporary scaffolds to support a building during construction. Once the building can stand alone, the scaffold is removed. Learners in the classroom can be helped with teacher scaffolding in the same way. Scaffolding in learning is a special kind of help (Gibbons, 2002) that teachers can use to help learners move forward in their learning and understanding.



Vygotsky says that children can be helped to learn in the areas just beyond those they can reach alone. He called the distance between their original level and new, potential level of development the *zone of proximal development* or ZPD. Scaffolding is used to help children move into their ZPD.



Sharpe (2001) divides scaffolding into two types, *contingent scaffolding* and *built-in scaffolding*.

Contingent scaffolding

Contingent, or immediate, scaffolding takes place on-the-spot. An example would be a teacher's response to learners' on-the-spot questions in a lesson, where a teacher realises the learners are struggling with the input, and then uses a learning conversation to help them understand.

9 Contingent scaffolding

Rick: What's unemployment?
Teacher: Employed, does anyone know the word *employed*? (writes on board)
Learners: -
Teacher: You are *employed* if you have a job. Are you employed, Rick?
Rick: Yes.
Teacher: What are you employed as?
Rick: I fill shelves in a supermarket.
Teacher: OK. So, to *employ* means to have a job. What does *un-* mean if it comes before a word?
Learner: Not
Teacher: Yes, the opposite. Like *uncover* or *undo*. What do you think *unemployment* means, then… (etc.)

Built-in scaffolding

The second type of scaffolding is called 'built-in', or planned scaffolding. For example, teachers might plan in advance which questions to ask in a lesson or provide a scaffolding task such as a *writing frame* (see Examples 15 and 16).

10 Built-in scaffolding

The teacher prepares true/false statements in advance on the text 'How recessions work' to check if learners understand the main ideas, for example:

1 In 2008 the economic situation in the world got better. (F)
2 This article is about recessions. (T)
3 …

Teachers can also use scaffolding to support learners' skills development until they can work independently. CLIL teachers should provide scaffolding for both language and content learning.

APPLICATIONS IN CLIL

1 HELPING LEARNERS WITH INPUT

Teachers need to provide learners with a great deal of understandable input at the right level. Learners who interact and engage with such input also learn to process it more effectively. When designing lessons, the first thing teachers could consider is which key concepts they want their learners to understand. As a next step, teachers can focus on more specific details and design appropriate tasks for those. In other words, start with general understanding tasks related to both content and language, followed by tasks aimed at a more detailed understanding.

Here are some guidelines to help learners process and interact with input in the form of listening, viewing and reading.

	Dos	Don'ts	
Planning	**Do** decide beforehand what learners should do with the input, and set both content and language aims: "By the end of this unit, the learners can..."	**Don't** prepare your lesson only in terms of a page number or exercise: "We're going to do exercise three on page ninety-seven".	Start of lesson or theme
Warming up	**Do** carry out a short *warm-up task* linked to the topic of the input for focusing. For example, use a visual (photo, video clip, cartoon or diagram) to introduce the topic, or invite learners to think about what they already know about the topic.	**Don't** launch into a new topic 'cold' or without any introduction. Learners need to re-focus coming from a previous lesson and tune in to your subject.	
Using general ideas: the first contact with input	**Do** provide a task or some general questions for learners to answer when they read, watch or listen to input for the very first time. In this way, you guide them to understand the main idea of the input and give a reason for processing the input. Discuss their answers before you continue. If you want learners to read aloud to practise pronunciation, **Do** this at a later stage. Only ask learners to read already familiar material aloud. Ask them to read aloud simultaneously in pairs and tell them you are practising pronunciation. Help learners individually with pronunciation or as a class if you notice common problems. **Do** encourage learners to ignore words they do not know the first time they read a text, so that they can try to understand the main points without getting stuck on individual words.	**Don't** get learners to read new material aloud one by one. This will not help either their speaking or their reading development. Reading familiar texts aloud can occasionally be useful for pronunciation practice but - if done with unknown texts - actually slows down the reading speed and hinders understanding. Reading silently with a supporting task is more effective for taking in new information. **Don't** supply a list of 'difficult' words with a translation in Dutch. This encourages learners to stop every time they meet a word that is unfamiliar. This is a poor reading strategy and gets in the way of global understanding.	

	Dos	Don'ts	
Using details: further contact with input	**Do** provide a specific task for learners to answer while they read, watch or listen to the input a second time. Discuss their answers. If they haven't understood the input, ask if they need to listen, view or read again. Provide fresh tasks each time they take in the input. **Do** encourage learners to create their own questions around input, either by hypothesising before they are exposed to input, or to check understanding.	**Don't** encourage learners to stop at every single unknown word and don't do so yourself, either. Rather, encourage them to guess the meaning of words from context, so that they learn that they can succeed in comprehending input without understanding or stopping at every word. **Don't** provide answers to hypotheses before learners have had time to think of their own.	
Applying information and concluding	**Do** use the topic or the language of the input as a stimulus for further activities. Help learners produce their own spoken or written language at this stage. Draw attention to specific aspects of language or the characteristics of texts. **Do** work to help learners understand and recycle. Ensure that learners know both the meanings of words and their usage. Create new, active tasks to help learners recall and process ideas and vocabulary.	**Don't** expect learners to be able to reproduce vocabulary as soon as they meet it; they need to come across vocabulary in several different contexts before they can use it. **Don't** give a list of English words with their Dutch translations, either at the start of the lesson or at the end, since this won't help effective vocabulary learning very much.	End of lesson or theme or lesson

Table 3.3 Guidelines to help to process input

2 SELECTING KEY WORDS

When looking at material, for example in a course book or online, teachers first need to select vocabulary items that learners need to know and understand in order to be able to process the input in a task or experiment. This is the target vocabulary, or the key words. In CLIL, these are often subject-specific terms or concepts.

It is helpful to distinguish between *receptive* vocabulary, which learners need to recognise and understand, and *productive* vocabulary, which they need to use and communicate with. When performing *receptive tasks*, it is not vital that learners understand every single word. It is more important that they know enough vocabulary to carry out tasks and to understand the input. Some vocabulary can even be ignored, if it is very specific or used only once in a unit and is not essential for understanding.

11 Selecting vocabulary

Here is an example of the start of an *authentic text* for economics, 'How recessions work' (from money.howstuffworks.com/recession.htm). It includes new vocabulary, which can be categorised as follows:

- The five **bold** terms are words which the learners will need to use actively, since they will recur in the unit: **recession, economic conditions, stock market, economy and economists**.
- The five underlined terms are words which learners need to understand receptively but not use actively: tumbled, rising unemployment, guaranteed, depression, turn around.
- The five terms in *italics* can be ignored, since the text can be understood without them: *in session, Martin Luther King Day, economic stimulus package, news blitz, constitutes*.

How Recessions Work

On Jan. 21, 2008, stock prices tumbled around the world. Most analysts pointed to fears surrounding the United States economy and a possible **recession** as the reason for the drop. Ironically, **economic conditions** in the United States were affecting the world economy on a day when its own markets weren't even *in session* -- they were closed for the *Martin Luther King Jr. Day* holiday. Three days later, news outlets were already reporting a new *economic stimulus package*, designed in part to try to prevent a **recession**.

This isn't the first **recession** news in recent memory. On Nov. 26, 2001, the news media announced the United States was officially in a **recession** and had been since March of that year. To most Americans, this wasn't all that surprising: Rising unemployment and a weak **stock market** had been in the news for months.

Both the 2008 market drop and the 2001 *news blitz* raised a lot of questions. Who decides when the economy is in **recession**, and on what grounds? What actually *constitutes* a **recession**, anyway? When a nation's **economy** enters a **recession**, is life guaranteed to get harder for most of its citizens? And how often does a **recession** lead to a depression?

In this article, we'll find out what **recessions** are, see why they occur and examine the criteria **economists** use to identify them. We'll also look at the effects of **recession** as well as explore some of the ways a country can turn the economy around again.

3 NOTICING AND AWARENESS ACTIVITIES

Noticing involves helping learners to see explicitly how language works. Awareness activities can help learners to notice. Learners can notice two things: firstly, the meaning (*what* language is used) and secondly, the form (*how* the language is used). For example, if learners come across the sentence *On Jan. 21, 2008, stock prices* tumbled *around the world*, if they notice the meaning, they realise that *tumbled* means *fell*. If they notice the form, they realise that *tumbled* (ending in *-ed)* is a regular past tense, which is often used in combination with a specific time (*Jan 21, 2008)*.

Tasks involving noticing the form and the meaning of language structures help learners to learn a language better because they pay explicit attention to language (Noonan, 2004). Drawing learners' attention to how language is used in a text also helps them to write texts in which language is used in a similar way (Lyster, 2007). This leads to learners producing more accurate and more varied language and helps them explain content ideas more clearly. Here are some examples of tasks that promote noticing:

- Explain and draw attention to a particular form: "If we look at this text, we see a number of imperatives. For instance, *measure*, *fill*, *add up*, *empty*, *dissolve*".
- Recycle a structure frequently and consciously in spoken or written language: use important words yourself, put them into tasks and write them on the board.
- Ask learners to do tasks which highlight or underline a structure: "Adjectives are words used to describe nouns. They are words like *small*, *hairy*, *bald* and *long-legged*. There are quite a few adjectives in this text. Use a highlighter pen to highlight all the adjectives in this text".

Awareness activities involve guiding learners to a better understanding of how language is used. These are most useful when learners can see the immediate relevance of the language, for example, when learners can also use the noticed language in a task. Examples of awareness activities are tasks which help learners to discover a grammatical rule, or tasks which ask learners to compare and contrast language patterns in two texts, or in two languages (Lyster, 2007). The following tasks help learners to become aware of language:

- Ask learners to do a task that requires them be aware of a structure. For example, "Here are some instructions for an experiment. Complete the instructions with the 10 words (imperatives) provided below".
- Ask learners to change words from one form to another. For example, "How many related words can you make from the word unemployment?" (*employment*, *to employ*, *employable*, *employability*).
- Ask learners to find the differences in style between two texts.
- Ask learners to compare the way something is said or written in English and Dutch.

4 RECYCLING VOCABULARY 'MULTIMODALLY'

Recycling vocabulary helps learners to understand it; learners cannot usually grasp a word's meaning and retain it when they first come across it. Learners must work with new vocabulary to make connections with the networks in their long-term memory and store the words. Before they can use vocabulary, learners need to come across it several times, for example in a text, a discussion, a video or a task in a course book. After a while, learners will start to use the new words in their own work.

Teachers can help learners gain new vocabulary by providing words grouped into themes so that learners see the connections between them. They can also help learners recycle vocabulary in different ways - in other words, *multimodally* (see Chapter 2). Besides texts, teachers can use pictures, body language, words written on the board, experiments and models. One learner will remember most effectively through reading, another through seeing a picture, a third through a joke or hearing the word pronounced and a fourth through acting a word out. This makes multimodal input vital.

Here is an example of how a geography teacher required learners to recycle content and vocabulary multimodally in geography. The learners were asked to write a summary of the journey that a child took from the Cay Islands to the U.S.A. and to illustrate it with a labelled map. Here is a part of the text written by a pupil.

THE CAY ROUTE

This story is about a small, white boy called Phillip which took place during the Second World War. When Germans became a threat to the island of Curacao. His mother became worried and decided to flee the island and return to Virginia in the U.S.A. His father needed to stay on the Curacao for his work and could not join them. The father was worried because the Germans had U-Boats patrolling in the coast. Mr. Enright wanted his wife to fly back to the U.S.A., however she refused because of her fear for flying. In the end they went by boat. On the second day of the journey the boat was torpedoed. Phillip work up on a raft with a big, old Negro man called Timothy. [...]

Figure 3.2 Learner's written work

5 'POOR' AND 'RICH' VOCABULARY TASKS

The set-up of tasks is also an important factor in remembering vocabulary. The Multi-feature hypothesis explains that the more mental actions a task involves, the more likely a learner is to retain knowledge (Westhoff, 2009). Westhoff likens the learning process to a pinball machine: the longer material to be learned is kept in the pinball machine - maximising the number of 'hits' - the more likely a learner is to retain it. This means that it is essential to keep the learners active and offer them a variety of learning opportunities. Moonen (2008) describes 'rich' learning tasks as tasks that involve more mental actions which increase the amount of learning.

Poor learning vocabulary task	Rich learning vocabulary task
Memorise these words about metamorphosis English-Dutch and Dutch-English.	Use these words about metamorphosis to write a story about a butterfly in exactly 50 words.

6 PERSONALISING

Vocabulary will stick better through meaningful tasks related to the new vocabulary. One way of creating such tasks is *personalising*: learners do a task related to themselves. In a personalisation task, learners each have their own, individual response, which helps them recall and use the words in another context. They are more likely to recall the words if they are engaged with them, processing the words more deeply and 'anchoring' them in their brains.

Here are some examples of personalising tasks which process vocabulary more thoroughly. They can be used for variation in glossaries:

- Learners make a diagram, drawing, sketch or word map which links words together.
- Learners put the words onto a drawing or picture provided by the teacher, and explain to someone else why they have placed them there.
- Learners write the words on a continuum (for instance, from NICE to NASTY) and then explain their reasons for positioning the words in that way.
- Learners list the words to be learned in two columns under the words 'black' or 'white', then explain to a partner why they consider each word to be black or white.
- Learners individually write a short text which includes ten words they need to know. Divide the class into pairs, A and B. The As read their texts aloud and the Bs write down the ten words which they think are related to the topic. Then they swap roles.

More meaningful vocabulary tasks can be found in this chapter's practical lesson ideas.

7 GLOSSARIES AND PERSONAL IDIOM FILES

Glossaries allow learners to record important vocabulary. A glossary is often in the form of a notebook or computer file containing terms for each subject. It is a list of words which learners need to learn and understand, and often, use actively. A *Personal Idiom File* (PIF) is a glossary created by the learners, in which they write down the words that they want to learn. We have already seen that personalising is a good way of helping learners retain new words.

Glossary entries are more effective if they contain more than a translation or definition from the teacher or textbook. Writing down the meaning of the word and the way the word is typically used in English will help learners store the words better. In Example 12, associated words are also included. For each word or phrase in the glossary, the teacher has included the word itself, its meaning, its use in context and other associated words. The definitions should contain little to no new language: defining *ultraviolet light* as *solar radiation* does not help with understanding! Teachers can provide example sentences or ask learners to create their own examples and then check them.

12 Model glossary entries

Word	Meaning	Use	Related words (examples)
carbon dioxide CO_2	A colourless gas with no smell.	When we breathe, we breathe out carbon dioxide.	carbonised
acid rain	Rain with a lot of pollution which, when it falls, harms the environment.	Trees are dying in Sweden because of acid rain.	acidic
corrosion	A process that eats away materials, such as metals.	The corrosion in the car was so bad that the door dropped off.	corrode
fossil fuel	Fuel which is found in the earth's crust.	Coal, oil and natural gas are fossil fuels.	fossilised
sulphur dioxide SO_2	A gas that smells like bad eggs.	The sulphur dioxide from the volcano smelt bad.	sulphuric

Varying the way the glossary is used is motivating for learners. Other variations for glossary entries are:

- Copy the original sentence and underline or highlight the word to be learned.
- Give learners words or phrases which are associated with the glossary term (collocations). For example: *blind date, blind window, blind as a bat, blind faith.*
- Help learners recall words in groups or categories, for example by creating mind maps of words in themes.
- Create a narrative using ten of the words related to a topic. Learners listen to this story and notice the words used.

- If learners do not understand a word while doing a task, they go up to the board and write it in a designated space on the board. At an appropriate moment, the teacher discusses all the words or phrases with the whole class. This activity enables learners to decide for themselves which vocabulary they need to know.
- At the end of a lesson, take a few minutes to work on vocabulary. Ask learners to write down usage examples for two or three words they have worked on in the lesson. In random order, learners then read out one example, so that as many as possible are collected. The examples can then be entered into the PIF.

8 READING STRATEGIES

To process and understand input, learners need *reading strategies*. These help them become more independent learners that ultimately process input themselves in their own way. Below are several reading strategies related to input processing; more tasks can be found in this chapter's practical lesson ideas.

Reading strategy 1: guessing words

Encourage learners to guess the meaning of words or phrases by reading the text surrounding a word. Deducing the meaning of a word themselves is generally considered more effective for word retention than being given a teacher definition. The harder the learners work to guess the meanings, the better. Teachers should, however, be aware that guessing can lead to misunderstandings, and help pupils find the right clues. Clues to the meaning of a word are often found in the context, the surrounding words. The text may provide a definition explaining the word, or it may give examples illustrating it. Connecting words used after the familiar word may indicate a contrast, a comparison or a similarity. If the learner knows the word that the unfamiliar word is compared or contrasted with, this provides a clue to the unfamiliar word's meaning.

For example, a teacher could encourage learners to guess that the word *tumbled* means *went down* in the sentence *On Jan. 21, 2008, stock prices* tumbled *around the world*. A series of questions can show learners the right approach. What kind of word is it? Knowing that the word is a verb helps. What other words in the text may help? In the following sentence, *fear* shows it is something bad and *drop* is another word with the same meaning, something that prices can do.

Sample questions		Answers related to *tumbled*.
1	What kind of word is it (Is it a verb/noun/adjective/conjunction)?	Verb
2	What other words in the text may help you to guess the word?	Fears, drop
3	Is the word like another one in Dutch or another language which might help you to guess it?	Tuimelen
4	Look at the form of the word. Is there anything about it which might give a clue? Prefixes at the start of a word or suffixes at the end can help (for example, the prefix *re-* means *again, un-* means the opposite, the suffix *-ful* often indicates an adjective)..	The ending -ed indicates a regular past tense
5	Is the word made up of more than one word? For example *egg cup* or *keyhole*. If you know one half of the word, you can perhaps guess the other half.	Not relevant here
6	Are there linking words (*for example, but, therefore, neither… nor*)? For example, the sentence *He is posh but scruffy*, indicates that a *posh* person is not often *scruffy*.	Not relevant here

Table 3.4 Questions to help guess words

Reading strategy 2: working with word forms

Ask learners to look at the form of words to guess the meaning. For example, words with the prefixes *un-, in-, im-* often mean the opposite of the word without the prefix; words ending in *-tion, -sion, -cion* are generally nouns. Sometimes, similarity to words in Dutch or other familiar languages (French, German, Greek, Latin) can help learners guess the meaning of a particular word (*tumble* and *tuimelen*).

Reading strategy 3: predicting

Support learners in predicting what the possible contents of the input might be. For example, before actually starting to work on a text in detail, learners can survey it and look for indicators to make predictions about its contents. By drawing attention to these elements, teachers can help learners make independent guesses or predictions about the meaning of a text. Teachers can create tasks to focus learners' attention on the title, headings or subheadings, on pictures, charts, graphs or maps and on words in bold or italics. Later, the learner can consider the original predictions to see whether they were correct or not.

Reading strategy 4: distinguishing main ideas from details: skimming and scanning

Good readers quickly find and understand the main ideas in texts; teachers can support their learners in doing this, too. When working with texts, teachers can decide in advance which main ideas learners need to understand, then create general understanding tasks which focus only on the main points to achieve this.

Skimming and *scanning* are reading strategies which help learners to read more effectively. Skimming is the skill of reading quickly to find out the gist of a text. You might use it to decide if a text is interesting and should be read in more detail. Scanning is a reading strategy used to get specific information from a piece

of text. Sometimes readers need to skim a text; at other times, they need to scan. Often it is not important for learners to know and understand every single concept in a text. They need to learn when to run their eyes over a text noting important information to get the gist of a text, when to read rapidly to find specific information and when to read for more detail.

The first sentences of paragraphs in authentic texts often contain the most important information; this is particularly true for web content. An example is the online article 'I'm an eco-warrior' below. By only reading the first sentences of each of the seven paragraphs in the text, readers can get the general idea of the whole text without even reading it! These seven first sentences can be found in Figure 3.4.

Original text (adapted from http://www.bbc.co.uk/slink/real-life/stories/im-an-eco-warrior)

Real-life stories: I'm an eco-warrior
Jess' love for the environment has meant she's won a competition, been to No. 10 and even appeared on TV. This is her story...

I'm a 13 year old girl who likes listening to music, going out with my friends and spending quality time with my family. The only thing that makes me a bit different is that I'm really into the environment.

In fact I'm so crazy about the environment I won a competition, and now I'm a Climate Change Champion. This is my story about how I won and why I actually do like hugging trees!

I have always been really interested in the environment and have always enjoyed finding out what was happening in my world and keeping up to date with world issues. So when one of my teachers introduced me to the competition, I was really excited.

This was my opportunity to make a real difference and talk up a subject I am really passionate about. The competition was about finding young people who really cared about the environment and wanted to inspire change, so I decided to make a film.

My documentary was about climate change and its consequences, I worked really hard on it but was absolutely amazed that it got me through to the semi-finals. Here I was interviewed by four climate change experts. I felt like I was on Dragons' Den and it was so scary.

"It's not every day you have tea with the Prime Minister"

Winning time
I guess I didn't let my nerves get the better of me because I won my round and was awarded the title of Climate Change Champion for my region. I was ecstatic.

Figure 3.3 Eco-warrior text

I'm an eco-warrior (seven first sentences)

1 I'm a 13 year old girl who likes listening to music, going out with my friends and spending quality time with my family.
2 In fact I'm so crazy about the environment I won a competition, and now I'm a Climate Change Champion.
3 I have always been really interested in the environment and have always enjoyed finding out what was happening in my world and keeping up to date with world issues.
4 This was my opportunity to make a real difference and talk up a subject I am really passionate about.
5 My documentary was about climate change and its consequences.
6 "It's not every day you have tea with the Prime Minister".
7 I guess I didn't let my nerves get the better of me because I won my round.

Figure 3.4 Using first sentences

To help general understanding of the text, learners can perform the following scanning task.

Scanning task
Read the text 'I'm an eco-warrior': are these sentences are true or false?
1 Jess won a competition by making a film.
2 Jess is very interested in the environment.
3 Jess' prize was an afternoon with the Prime Minister.

Figure 3.5 Scanning task

9 TEXT TYPES AND STRUCTURES

Written text comes in all sorts and sizes: newspaper articles, postcards, e-mails, instructions, advertisements and letters. These are known as *text types* or *genres*. Typical text types for science are laboratory reports and descriptions of experiments, and a typical text type for history is a historical article describing causes and effects. A written *authentic text* almost always has a specific communicative purpose or a *function* (persuading, selling, giving an opinion), and is aimed at a specific audience (teenagers, scientists, parents). Good present-day textbooks will contain a mix of authentic texts, so that learners are exposed to many different text types.

Teachers can help learners study different aspects of texts. Important skills for CLIL learners are the ability to recognise, understand and work with text types (also see Chapter 4). Learners' understanding of a text can be increased in the following ways:

- Recognising the text type (e.g. article, brochure, report), the audience (e.g. the management, the general public, my aunt) and the purpose (e.g. to instruct, to explain).
- Recognising a text's organisation structure to get an overview of the text. For example, paragraph one is an introduction to the topic, paragraph two is an argument for, paragraph three another argument for, and paragraph four contains two arguments against.
- Recognising text features. Similar text types often contain similar language, such as language of cause and effect, or language used to express opinions. Recognising these language features leads to a better understanding of the content.

Working with learners to help them to notice types of text, common text language and structures can help them understand textual input, as well as - perhaps at a later stage in their learning - create their own texts independently. Discuss these issues with your learners or create tasks around the fact that there are different text types, each with a different aim, audience and organisation.

7 Text types and purposes

Below are three examples of text, each written for a different purpose. Read the texts and match them with one of the eight purposes in the right-hand column.

Text	Purpose
Text 1 Tto, bilingual education, is an educational method that has been used by a growing number of schools in the Netherlands since the early nineties. It means that half of the curriculum is taught in English, the other lessons are taught in Dutch. *Jacob van Liesveldt* started bilingual lessons in VWO in 1998. Later the school started a bilingual HAVO stream as well. Meanwhile the school is proud to have obtained the tto Certificate, the official quality mark of the European Platform. (from: www.penta.nl)	argue persuade inform
Text 2 This story begins with *Once Upon A Time*, because all the best stories do, of course. So, Once Upon A Time, and imagine if you can, a steep-sided valley cluttered with giant, spiky green pine trees and thick, green grass that reaches to the top of your socks so that when you run, you have to bring your knees up high, like running through water. Wildflowers spread their sweet heady perfume along the gentle breezes and bees hum musically to themselves as they cheerily collect flower pollen. (from: http://www.eastoftheweb.com/short-stories/UBooks/DragRock.shtml)	describe instruct compare
Text 3 The game of bridge has two main parts: the *Bidding* (also called the Auction) and the *Play*. You should learn the play first because it will give you a better sense of what the bidding means. In fact, learning the bidding first is a mistake and can be a turnoff to new players. Bridge is a partnership game requiring four players. Each player sits opposite his partner at a card table (in this age of computers the concept could be a simulation). Bridge is played with a standard deck of 52 playing cards. One of the players deals all of the cards, 13 to each player, in clockwise rotation, beginning with the player to the left of the dealer. (from: www.rpbridge.net/1a00.htm).	contrast

Text types can often be recognised by certain text or language features. These give the reader hints about what is happening in the text. Try showing examples of different text types in your subject, pointing out typical text features and language relating to different text types.

Text type and aim	**Text features**	**Language commonly used in this type of text**
Description Aim: describes something or someone	Text gives facts about a subject, and elaborates on these. Sections of the text often consist of a main idea or definition, then an elaboration on different aspects of the topic. Often includes subheadings. Usually written in an impersonal style, in the *third person*, and present tense. Examples: text about mammals, a description of a geographical area or a person.	*For example, for instance, specifically, in particular, in addition, moreover, also* Adjectives and adverbs Language to do with the five senses: sight, hearing, touch, taste and hearing Comparisons, similes and metaphors
Information Aim: provides facts	Not much repetition, factual and clear. Examples: programme brochure of a theatre, informative flyer about the life cycle of a head louse.	Modal verbs: *can, should, may, might* Times and dates Present tenses or imperatives
Cause and effect Aim: tells what the effects of an event are	Text contains the result of an event or occurrence and the reasons why it happened. Example: text about effects of World War II on the lives of people in the UK and Germany.	*Consequently, therefore, as a result, thereby, leads to, thus, accordingly, in this way*
Narrative Aim: tells what happened	Text tells a story, often in the past tense with speech in the present tense, in chronological order. After setting the scene (when, who, where and what), the writer describes a sequence of events. Example: Anne Frank's diary	*First, next, later, after that, afterwards, when, meanwhile, then*

Comparison or contrast Aim: compares two or more objects	Text compares the differences and similarities of two or more objects, places, events or ideas. Example: text about the symptoms of the common cold and flu.	*However, unlike, like, by contrast, yet, in comparison, although, whereas, similar to, different from, on the one hand... on the other hand* Advantages and disadvantages Comparatives and superlatives
Procedure Aim: instructs	Text tells the order in which steps in a process or series of events occur, often a set of instructions (with list of materials needed). Often in present tense and may include imperatives. Example: a description of an experiment, a recipe.	*Next, first, last, second, another, then, additionally, then, furthermore, moreover* Imperatives: *add, fry, chop, mix, beat*
Arguments for and against Aim: discusses different points of view and reaches conclusion	Text states an issue, event, topic or idea. A number of different arguments for and against follow in a parallel structure. The arguments are summarised and a conclusion is drawn or recommendation is made. Example: text about the advantages and disadvantages of vegetarianism or political parties.	*On the one hand...on the other hand, for example, for instance, firstly, secondly, lastly, finally, furthermore, in my opinion, to summarise, I believe* Comparatives and superlatives

Table 3.5 Text types, aims, features and language

BBC Skillswise has a great game for further practice in recognising types and purposes of texts: www.bbc.co.uk/skillswise/words/reading/typesoftext/game.shtml.

10 USING THE CEFR

To help learners process difficult input, also use the Common European Framework of Reference for Languages (CEFR). The can do statements on the CEFR can help create tasks which learners at a lower level can complete. If the input is too easy, teachers can create tasks at a higher level, or use a different skill on the CEFR.

A2	B1	B2
I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple personal letters.	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.

Table 3.6 CEFR Reading levels A2, B1 and B2

Example 13 shows a task at A2 level. Learners would need to be at B1 level to be able to read the text independently. The task is easier so as to help A2 learners to understand the text.

13 A2 level task

Eco-Warrior
Are these sentences about the text true (T) or false (F)?

1 Jess was on the radio.
2 Jess loves the environment.
3 Jess likes her family.
4 Jess made a film.
5 Jess won a prize.
6 Jess thought she was going to win.
7 Jess had tea with the Prime Minister of England.

KEY 1. F 2. T 3. T 4. T 5. T 6. F 7. T

This is a more difficult task to challenge B2 learners:

14 B2 level task

Eco-Warrior

Below you find a list of words related to feelings. Write down why you think Jess had these feelings. Sometimes you might need to read between the lines.

Crazy about	interested in	enjoyment
Excited	passionate	amazed
Scared	nervous	ecstatic

11 SCAFFOLDING TOOLS

Provide *scaffolding tools* for learners to process the material they are working on. These tools provide direction and purpose, and focus learners on the material to be learned.

Dodge (2009) describes three different types of scaffolds to aid learners in understanding and processing input:

- *Reception scaffolds* help direct learners' attention to what is important in information sources, and helps them to organise, understand and record what they observe.
- *Transformation scaffolds* help learners change information into another form, and require higher thinking skills.
- *Production scaffolds* help learners produce or create something new, which shows their understanding; these also require a higher level of thinking.

The first two types are discussed below; the third will be dealt with in Chapter 4.

Reception scaffold

Example 15 presents a reception scaffold - a *watching frame*. A reception scaffold helps learners understand provided information. In this watching frame, learners decide how to organise factual information that they have seen on a video.

15 Reception scaffold: writing frame for art

Henri Rousseau

During a series of lessons on naïve art, an art teacher introduces the artist Henri Rousseau on video. She provides a scaffold - a watching frame - to focus her learners' attention on the important information and language in the video which the learners will need later on. They first complete the table alone, and then share their information with a partner. The information in the frame - both content and language - will be used to complete a further task: to describe another painting by Rousseau, using their completed writing frame as a scaffold.

Instructions

As you watch the video, fill in this table.

	Title of painting	Painted when?	Where is it now (museum, city)?	Main colours used
Example 1	*The dream*	*1910*	*Museum of Modern Art (MOMA),*	*light green, dark green, New York purple, flesh colour...*
2				

WHY IS THIS CLIL?

This watching frame is an interesting example of built-in scaffolding for content and language. By completing the table, learners understand the *content* better. By providing the table, the teacher organises the important information for the learners. She focuses the learners on what is important and helps them to ignore the less important information. This teaches learners good strategies for filtering out the irrelevant and watching for specific content-related information.

The task also helps learners notice and understand *language*: by asking them to notice relevant words (descriptive adjectives, colours), the teacher provides the learners with vocabulary they can use themselves. By asking for dates, the teacher draws attention to how these are pronounced in English.

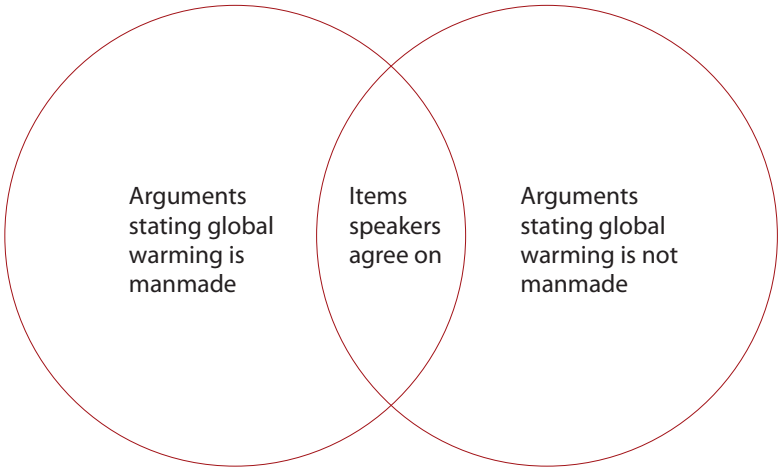
Transformation scaffold

A transformation scaffold is more challenging than a reception scaffold. Whereas a reception scaffold helps learners to process or re-organise information, a transformation scaffold requires learners to work with the information and change it into a different form.

16 Transformation scaffold: writing frame for geography

Global warming

In a geography lesson, the learners watch a television debate about the effect of human activity on global warming. Various speakers state their views. As they watch, the learners take notes of the arguments presented in the *Venn diagram* below - a watching frame. In the left-hand circle, they note down the arguments which state that global warming is caused by man; in the right-hand circle, they note the arguments which state that this is not so; and in the overlapping centre of the diagram, they note down items that the speakers agreed on.



WHY IS THIS CLIL?

Example 16 shows a transformation scaffold for content and language. In contrast to the reception scaffold of Example 15, learners need to change (or transform) the *content* to complete the Venn diagram. As they work, they need to judge where to note down arguments for and against the theme. Changing information into a new form involves higher-level thinking skills.

This task also focuses on *language*. To be able complete the diagram correctly, learners need to understand language used for arguing and giving opinions, such as *in my view*, *at the same time*, *firstly*, *some evidence is*, *that's one thing*, and *an important point is*. Teachers can help learners to notice, recognise and understand these words or markers, so that learners can identify the arguments more readily.

12 GRAPHIC ORGANISERS

Graphic organisers, also known as *cognitive organisers*, are examples of scaffolding tools. They are visual representations and organisational tools that help learners (re-)organise input by noting down information. This makes learners become aware of text organisation, which helps them understand and process information. Both Example 15 and 16 use graphic organisers.

I always have learners write in a graphic organiser before they write an essay. I find it invaluable for helping them sort information into organised paragraphs.

Figure 3.7 Practical idea using graphic organiser

Depending on their purpose, graphic organisers can be used before, during or after listening, reading, viewing, writing or discussing. There are many kinds of organisers; ones for generating ideas, for working with cause and effect, and for comparison and contrast.

13 USING VISUALS

Much of the input our learners process is written or spoken text (including teacher talk). Visuals are a form of non-linguistic input. Some examples are:

pictures diagrams models drawings demonstrations	models maps graphs *storyboards* photographs	plans video material objects cartoons

Visuals are useful scaffolding tools that can help learners understand and work with input.
They are especially helpful if input is proving difficult to comprehend.

The following example illustrates how a religious education teacher used visuals and scaffolding to help learners to understand difficult content.

17 Using visuals and scaffolding for religious education

Storyboard and *freeze frames* used to explain a Sikh ceremony

In a religious education book, one unit covered a Sikh initiation ceremony, the *Khalsa*. The teacher wanted to use the unit, since it deals with typically British religions and is interesting from a cultural point-of-view. However, the first-year class using this book had only been in the bilingual stream for about eight weeks, and the language was extremely difficult for them. The teacher decided to help learners understand the unit by simplifying, and adding visual elements.

First, the teacher searched the Internet for a simplified story about the founder of Sikhism. In her first lesson, she read this story out loud to the class, checking understanding as she went. The class was then divided into small groups. Each was given a part of the text in her course book about the ceremony: the difficult text was split up into smaller chunks. Each group had to create a freeze frame - or dramatic still life - to illustrate their part of their text and the ceremony. All the learners in each group had to appear in the freeze frame and it had to be a clear illustration of their part of the Sikh ceremony. They thus showed their understanding of the text in a physical way. When the learners were in position, the teacher took a digital photo of each freeze frame.

In the next lesson, the class created a storyboard of the whole Sikh ceremony using the photographs of the freeze frames. A storyboard consists of a number of rough sketches showing how scenes in a film are sequenced. The teacher handed out each group's photo in A4 format. The task was to add speech bubbles and to write a short description of the scene and its place in the ceremony. The whole class then put together their complete storyboard.

WHY IS THIS CLIL?

This lesson is a good example of visualisation to help learners understand both language and content. First, the teacher simplifies the content: she finds an easier version of complicated input and splits up the more difficult text into easy-to-digest chunks. She also carefully checks understanding of each part of the text. Dividing the content between groups provides further simplification: each group does not need to comprehend the whole text the first time round. Second, the teacher uses non-linguistic tasks: the freeze frames and the storyboard. Third, she encourages interaction; learners have to negotiate in groups when creating their freeze frames, discussing the content to create a 'living picture' which summarises their part of the Khalsa ceremony. Fourth, the teacher uses scaffolding, providing digital photographs of the freeze frames for creating the final storyboard. Last, at the end of the lesson series, the teacher encourages written output, thus recycling the learning of content and language. The short but very focused written assignment (speech bubbles and a short description of the scene) succinctly shows how much the learners have understood; an example of effective built-in scaffolding.

14 QUESTIONS FOR UNDERSTANDING

Scaffolding can also be provided through effective questions. Much classroom time is spent on formulating and answering questions. Teachers ask questions to interest, engage and challenge learners, to check prior knowledge, to remind them of previous learning, to focus and to analyse. Good questioning challenges the learners' thinking, improves their learning and encourages them to formulate longer responses in English. It also helps the teacher to assess understanding.

CLIL lessons where questioning is effective include these characteristics:

- Questions are planned in advance by the teacher.
- Questions are linked to lesson aims.
- Teachers give learners adequate time to think between asking questions.
- Short questions are used to check facts quickly.
- There are more fat questions than skinny questions (see below).
- Questions encourage opinions, elaboration and discussion.
- Questions are sequenced from easier to more challenging.
- Learners create their own questions.
- Learners ask each other questions and give each other feedback.
- Learners feel safe and dare to take risks and make mistakes.
- Questions are personalised.

Questions can be seen as contingent or built-in scaffolding; often teachers will react spontaneously to what is happening in class using contingent scaffolding. Sometimes teachers can plan questioning strategies in advance using built-in scaffolding.

15 FAT AND SKINNY QUESTIONS

Another way of thinking about questions is to divide them into *fat* and *skinny questions*. Skinny questions usually yield facts and are easy to answer in a few words. The control of the conversation remains with the teacher. In contrast, fat questions have more than one answer and help learners to think more deeply about input and speak longer. The control of the conversation often passes from the teacher to the learner. Fat questions can be used to assess learning, to explore attitudes, values, or feelings, to help learners to see a concept from another perspective, to prompt learners to support their arguments or to investigate a thought process, to predict possible outcomes, and to connect and organise information.

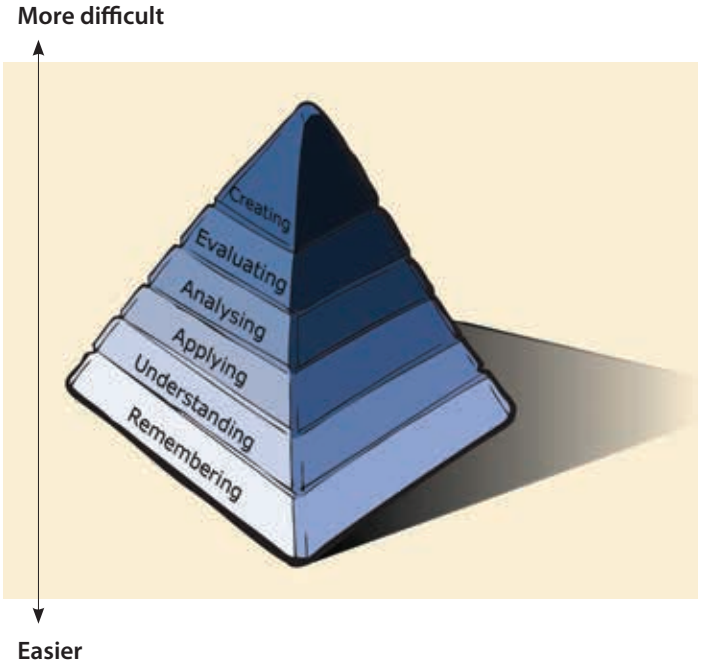
8 Fat and skinny questions

Can you think of fat questions to replace the skinny questions? The first three answers have been provided.

Skinny questions (lower thinking skills, short answers)	Fat questions (higher thinking skills, longer answers)
1 What happened when I added the acid?	1 Can you explain the shape of the graph?
2 What is electricity?	2 How could we use our work on electricity to design a winter lighting system for a greenhouse?
3 What is the greenhouse effect?	3 How might the greenhouse effect affect the lives of your children and grandchildren?
4 Give me ten different words starting with *in-*.	4
5 Have you read Chapter 8?	5
6 What did David Livingstone discover?	6

16 BLOOM'S TAXONOMY

Bloom's taxonomy is a useful tool to plan questioning or tasks. The taxonomy is divided into six categories: remembering, understanding, applying, analysing, evaluating and creating. Analysis of teachers' questioning in the classroom has shown that 70-80% of classroom questioning falls within the first two categories: remembering and understanding (Wragg and Brown, 2001). To challenge learners more, use the taxonomy to create more difficult tasks and questions that require higher-level thinking and language skills.



Bloom's new taxonomy	Question	Words
Remembering	Can the learners remember?	tell, recall, repeat, list
Understanding	Can learners explain?	describe, explain, paraphrase
Applying	Can learners use the information in another situation?	demonstrate, dramatise, illustrate
Analysing	Can learners break the information into parts and see relationships?	compare, contrast, criticise, test
Evaluating	Can learners justify a position?	argue, judge, evaluate
Creating	Can learners create new products?	construct, create, design

Table 3.7 Bloom in a nutshell

The table below provides suggestions for practical questions and tasks which might be used in the classroom to help learners process input.

Bloom's category	**Examples of useful words for asking questions**	**Examples of tasks and questions**
Remembering	tell recall repeat list	• List the events of the story in chronological order. • Name ten parts of the body. • Tell me what Pythagoras' theory is. • Identify five characteristics of a living organism.
Understanding	describe explain paraphrase	• Tell me what you observed during the experiment and explain why that happened. • Describe Mary Queen of Scots' character. • Compare plastics with polymers in this Venn diagram. • Discuss in your groups what happens when a tsunami hits a coast.
Applying	demon- strate dramatise illustrate	• How can you interpret these graphs about AIDS? What do they mean? • How would you construct a new experiment to get the same results? • How would you solve the problem of global warming? • Make a brochure to inform and advise teenagers about sexually transmitted diseases (STDs). Provide illustrations.
Analysing	compare contrast criticise test	• Put these statements into three categories and explain to your partner why you chose the categories. • Analyse and examine your results: what do they say? • What is the relationship between oil production and consumption? • Propose three solutions for the problem of tooth decay in teenagers, inferring ideas from the information you have read about tooth decay.

Evaluating	argue judge evaluate	• Compare and contrast the outcomes of the two experiments on photosynthesis. • Design a questionnaire for our class to evaluate how we worked during the project. • Write an article for a website for young people, recommending some solutions for the problems surrounding integration in the Netherlands. • Select and explain the most important improvements which you can recommend for this experiment.
Creating	construct create design	• How could you create a lighting circuit for a greenhouse which comes on at sunset and goes off at sunrise? • Speculate on what would happen if the earth's temperature rose by five degrees centigrade in the next five years. • Compose eight bars of a melody with the same rhythm as the one we have been studying. • Write a plan for a safety procedure during an earthquake for a school in Bali. • Formulate a proposal to reduce the school's energy costs by 10% within a year.

Table 3.8 Practical examples of questions and tasks according to Bloom

17 CUMMINS' QUADRANTS AND GUIDING UNDERSTANDING

We can also look at processing input in terms of the Cummins' Quadrants, which were introduced in Chapter 2, can also be used to guide understanding and process input.

<table>
<tr><td colspan="5">ACTIVITIES FOR GUIDING UNDERSTANDING: NEED LESS THINKING</td></tr>
<tr><td rowspan="2">A LOT OF CONTEXT</td><td>Quadrant 1
Input supported by lots of visuals and day-to-day language.

Biology: metamorphosis

Learners put a set of cards (drawings of metamorphosis of a caterpillar to a butterfly) in the right order.</td><td>Quadrant 2
Input with little context, cognitively undemanding, day-to-day language.

Biology: metamorphosis

Teacher puts pictures of metamorphosis in the right order and the learners copy the pictures and colour them in.</td><td rowspan="2">LITTLE CONTEXT</td><td>B
I
C
S</td></tr>
<tr><td>Quadrant 3
Input supported by a lot of context but with cognitively demanding, more abstract language.

Biology: metamorphosis

Learners watch a video about the metamorphosis of a caterpillar to a butterfly and use information and words from the video to write a poem about the emerging butterfly.</td><td>Quadrant 4
Input with very little context, cognitively demanding, more abstract language.

Biology: metamorphosis

Learners read a text about the life cycle of an endangered butterfly and the environmental changes which threaten its existence. They then receive this task: the butterflies in a zoo are suddenly dying. Prepare a presentation for the zoo advising on measures to ensure the butterflies' survival.</td><td>C
A
L
P</td></tr>
<tr><td colspan="5">ACTIVITIES FOR GUIDING UNDERSTANDING: NEED DEEPER THINKING</td></tr>
</table>

Figure 3.8 Cummins' Quadrants applied to guiding understanding

CONCLUSION

In this chapter, we have discussed how important it is for learners to interact actively with content and language input to enhance their understanding of these types of input. Teachers can help them achieve this by dealing appropriately with vocabulary and by providing reading strategies. Scaffolding is a useful tool to guide understanding, too: teachers can design reception and transformation scaffolds to help learners focus on important aspects of input. Appropriate questioning - both planned and on-the-spot - and raising awareness of text types and features are additional ways of helping learners understand.

To sum up, when guiding learners to understand input in CLIL, teachers can:

- provide easy tasks during a first reading or viewing, e.g. yes/no questions about facts or questions on parts of the input;
- provide clear tasks and a reason for processing (reading or listening to) the material;
- help learners engage with input and change its form after a first reading or viewing;
- create more difficult tasks which require more processing of the text;
- teach and recycle vocabulary actively and multimodally;
- help learners notice and work with the purpose and organisation of different types of texts;
- provide scaffolding tasks and tools;
- relate the topic to the learners' real lives; personalise input;
- ensure that glossary work includes definitions and English examples in context;
- work on reading strategies so learners become proficient readers;
- create active reading tasks which include skimming, scanning and guessing;
- get learners to match subtitles with paragraphs;
- use visual support: design tasks which draw attention to non-textual aspects of input (visuals, titles and subtitles, body language, art work) or which explain or illustrate difficult content;
- use the CEFR to adjust the difficulty level of a task;
- design graphic organisers or frames;
- analyse their use of questioning in the classroom and design appropriate questions in advance related to the purpose of their lessons;
- use Bloom's new taxonomy for inspiration in creating tasks.

9 Teacher development: guiding understanding

Choose some material you are currently working on in class, and try the following tasks:

1 Read the section on Personalising and design a personalising task.
2 Prepare a number of questions which apply different levels of Bloom's new taxonomy.
3 Design either (a) a graphic organiser or (b) a reception scaffold or (c) a transformation scaffold to help learners process a text from your course book.
4 Plan a question sequence to help learners think the material. For example, move from skinny to fat questions, or from a lower to a higher level of Bloom's taxonomy.

PRACTICAL VOCABULARY IDEAS

27 ODD ONE OUT

Decide why a word does not fit in a group.

Create groups of 4-5 words or concepts related to a topic you have already covered. Ask the learners to discuss in pairs or groups which word is the odd one out. There should be no easy right answer or obvious word that doesn't fit. The learners should have to think quite hard and argue their point in order to discover their own odd one out.

Economics: money
Fares, fees, price, money
Fortune, treasure, wealth, money
Lend, hire, lease, borrow
Receipt, bill, tip, note

Chemistry: plastics
Styrofoam, polystyrene, PVC, Teflon, Saran
Mould, melt, scorch, recycle, bend
Inert, raw, brittle, hard, heavy
Gum, rubber, plastic, nylon, vinyl

28 WORD CARDS

Sort words on a topic into sub-categories.

Choose 20-30 words related to a topic you are covering that you would like to emphasise or recycle. The words should be divisible into three or four categories such as related sub-topics (biology - bones, organs and other parts of body) or other types of sub-topics (colours, shapes, a continuum). Write all words in a jumble on the board. Learners categorise the words on a hand-out or in their notebooks.

Geography: China
Physical geography: steppe, desert, Tien Shan mountains, Himalaya, plateau, Taklimakan desert, Yangtze river, Yellow River, typhoons, bamboo
Economy: terrace, commune, irrigation project, silk, rice paddy, water buffalo, heavy industry, special economic zones, mining, yuan
Culture: Mandarin, Confucianism, one child policy, Han, ethnic minority, Cantonese, Buddhism, Taoism, Cultural Revolution, politburo

Economics: banking

We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better.

Account, bank, statement, borrow, budget, cash, cashier, cheque, credit card, currency, deposit, savings, withdraw, instalments, receipt, refund, income, pay into, save up, take out, broke, hard-up

1 Write each word under the colour you associate it with. For example:

Yellow	**Blue**	**Red**	**Green**
cash	savings	withdraw	pay into

2 Explain to your partner or group why you have chosen a particular colour for a word.

Learners might say things such as "I put *savings* under BLUE because it's the colour of my bank's website", or "I put *withdraw* under red because if you have a negative bank balance you are in the red".

History: the Industrial Revolution

We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better.

capital, capitalism, collective bargaining, communism, conservative, enclosure, entrepreneur, union, exploitation, industrialisation, monopoly, obsolete, oligopoly, oppression, proletariat, radical, strike.

1 Write each word under the shape you associate it with. For example:

industrialisation	entrepreneur	oppression	oligopoly

2 Explain to your partner or group why you have chosen a particular shape for a word.

Learners might say things such as "I put *industrialisation* under the square because it sounds organised".

Biology: five senses

We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better.

colour blind, listen, tongue, bitter, hard of hearing, tickle, glance, stroke eye, glimpse, rub, look at, notice, stare, hear, eyesight, scent, stink, sniff, aroma, nose, inhale, mouth, sweet, deaf, sour, taste buds, feel, ear, massage, blind.

Write each word under the sense you associate it with.

Possible key

Hearing: hear, listen, deaf, hard of hearing, ear
Sight: glance, eye, glimpse, look at, notice, stare, colour blind, eyesight, blind
Smell: scent, stink, sniff, aroma, nose, inhale
Taste: mouth, tongue, sweet, sour, bitter, taste buds
Touch: feel, stroke, tickle, rub, massage

Physics: energy

We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better. Write the words on the continuum between **Nice** and **Nasty**, according to your own opinion.

solar electricity, volts, milliamp, milliwatt, to generate, to power, battery bank, inverter, electricity consumption, power grid, solar cell, solar panel

solar electricity	solar cell	solar panel	to power	electricity consumption	to generate	to power	milliamp	milliwatt	battery bank	inverter	volts

Nice ← → **Nasty**

Biology: blood vessels

This activity is useful for topics where sub-topics have three or four different characteristics. Use it at the end of a topic to revise what learners have learned.

1 Make a table containing your chosen topics and their characteristics.
2 Copy the table you have created onto different pieces of coloured cardboard, one colour for each group of learners. Cut out the cards and shuffle them.
3 Learners form groups of four. Each group is given a pile of shuffled cards (of a single colour). Tell them they have 10 minutes to arrange the cards into three logical columns on their table.
4 You circulate, asking critical questions and giving hints about the choices learners have made.
5 Learners should be encouraged to use English only and to explain to each other why they think a card belongs in a certain column.
6 After 10 minutes, the groups rotate. Each group moves to another table and has another 5 minutes to correct or reorganise the work of another group.
7 The groups return to their original table and try to discover the changes the other group made to their work. They reorganise the columns again, depending on whether they agree or disagree with the new order.
8 If learners get stuck, you can scaffold learning by providing a short text about the three topics.
9 Discuss the correct answers with the whole class or with individual groups.
10 The columns can be arranged to produce a table of properties (for example, of the three types of blood vessels) that can be copied into notebooks for revision.

Arteries: carry blood away from heart; blood at high pressure; no valves; thick muscular walls; no substances leave or enter vessel; pulse created by heart pumping & contraction of wall muscle; strong walls; carry oxygenated blood (with one exception)
Capillaries: carry blood through tissues and organs; blood at low pressure; no valves; very thin walls for escape of fluids; exchange of substances with tissues; no pulse; walls delicate and easily broken; carry mix of oxygenated and deoxygenated blood
Veins: carry blood towards heart; blood at lowest pressure; valves to stop blood flowing back; thinner walls with less muscle; no substances leave or enter vessel; no pulse; walls flexible & squashed easily so blood pushed further along vessel; carry deoxygenated blood (with one exception).

29 EVERYDAY, ACADEMIC AND SUBJECT LANGUAGE

Decide which words are more academic and which are more everyday language.

Ask learners to organise words and phrases into a table to show the difference between everyday language, subject language and academic language.

Biology: homeostasis

Ask the learners to put these words under the right column in a table with the following columns: Everyday words, Academic words, Subject (biology) words.

glucose, keeps, is maintained, sugar, inhibits, stops, rapid, quick, endocrine, hormones, release, blood, thermostat, bloodstream, secrete, pancreas, eating, sugar molecule, blood sugar level, insulin, cell, liver, internal, homeostasis, metabolism, let go, digesting

Here is a suggested key; others answers are possible (e.g. blood could also be seen as a subject word).

Everyday words: blood, eating, keeps, let go, liver, quick, stops, sugar

Academic words: digesting, is maintained, inhibits, internal, rapid, release, secrete

Subject (biology) words: bloodstream, blood sugar level, cell, endocrine, glucose, homeostasis, hormones, pancreas, insulin, sugar molecule, metabolism, thermostat

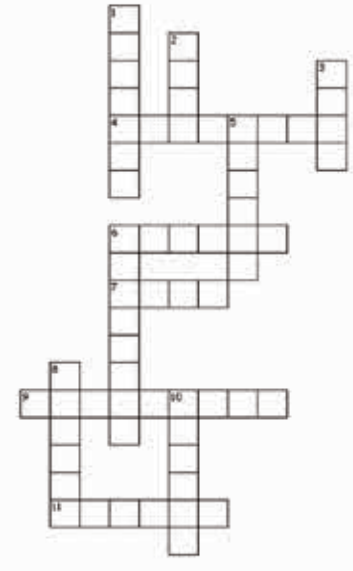
It is possible to add a second step to this activity to emphasise the difference between academic and everyday language: ask learners to think of synonym pairs (quick - rapid; release - let go).

30 CROSSWORD

Complete a crossword puzzle.

After a number of lessons around a topic, choose the words which are important for learners to retain and create a crossword with those words. This is easily done online.

Chemistry: the Periodic Table



Across

4 H
6 Cu
7 Pb
9 Mg
11 Ni

Down

1 S
2 Au
3 Zn
5 O
6 Cl
8 C
10 Ag

This crossword, which revises elements in the periodic table, was made with Puzzlemaker http://puzzlemaker.discoveryeducation.com/CrissCrossSetupForm.asp

You can also create crosswords where the clues are word definitions, gapped sentences, or pictures.

31 MNEMONICS

Create a mnemonic to recall vocabulary.

Remind the learners of a series or number of words which they need to remember in sequence. Provide or ask them to invent a mnemonic to help them recall the vocabulary.

Chemistry: atoms which pair up
N (Nitrogen), H (Hydrogen), Cl (Chlorine), Br (Bromide), I (Iodine), O (Oxygen), F (Fluoride)

Mnemonic: **N**ever **H**it **C**lara's **B**rother **I**mmediately **O**n **F**ridays

Biology: classification
Kingdom, phylum, class, order, family, genus, species

Mnemonic: **K**ing **Ph**ilip **c**ame **o**ver **f**or **g**reen **s**paghetti.

32 GAPPED TEXT WITH ACADEMIC WORDS

Complete a text which includes gaps for academic words.

The AWL Gapmaker: www.nottingham.ac.uk/~alzsh3/acvocab/awlgapmaker.htm.
This online programme creates a gap filling exercise using the Academic Word List. Type or paste your text into the box on the site, select the sublist level (1-10) that you want to use and submit your text. This returns a new text with words from the selected levels of the AWL replaced by a gap.

Technology: smartphones
This gapped text about smartphones was produced in about one minute. Original source: communication.howstuffworks.com/smartphone.htm.

Gap File produced at level 6
Unlike many _____ cell phones, smartphones allow _____ users to install, configure and run applications of their choosing. A smartphone offers the ability to conform the device to your particular way of doing things. Most standard cell-phone software offers only limited choices for re-configuration, forcing you to adapt to the way it's set up. On a standard phone, whether or not you like the built-in calendar application, you are stuck with it except for a few _____ tweaks. If that phone were a smartphone, you could install any compatible calendar application you like.

Missing words: traditional, individual, minor

PRACTICAL ACTIVITIES RELATED TO TEXTS

33 NOTICING

Helping learners to notice language features in a content text.

Use a text which includes a particular language feature. First, discuss with learners why it is used in this particular text. Then ask them to highlight or underline the particular language feature.

At a later stage in your topic, you can provide tasks in which learners complete gap texts for themselves. Either suggest possible words yourself or, for more gifted learners, add extra words or get learners to think of appropriate words.

Physics: lab reports

The language of laboratory reports, which uses a lot of passive forms, is sometimes difficult for CLIL learners. This noticing task guides them to look at the passive tenses in an authentic laboratory report.

Instructions

Laboratory reports are often written in the passive tense (e.g. *The test tube* was filled*, The liquid* was measured out), to make them more formal and less personal. You can recognise passive-voice expressions because the verb phrase always includes a form of *be*, such as *am*, *is, was, were, are*, or *been*. However, the presence of a form of *be* does not necessarily mean that the sentence is in the passive voice. You can also recognise passive-voice sentences since they often include a 'by the...' phrase after the verb, for example *The man was bitten by the dog*).

Here is a part of a real laboratory report. Underline all the examples of the passive tense in the text. How many are there?

1 six 2 seven 3 eight 4 nine

Procedure

The spring we tested was a coil spring from the rear suspension of a 1968 Volvo sedan (model 142s). It was a left-hand helical compression spring, had open ground ends, and was made of steel. The dimensions of the unloaded spring, the outside diameter, the total number of coils of turns and the wire diameter are listed in Table 1. Using these dimensions, the spring's fully compressed length (solid height) was estimated to be xx cm, or -xx% of its free length. This estimate was based on the following equation [...] where **NT** is the total number of coils, **L0** its free length and **d** is the diameter of the wire. This value was used to specify the maximum compression which was used in the test. Setting this value at xx%, an estimate of the forces that would be generated was also made using the following equation where x is the deflection of the spring, **N=L0/NT** is the number of active coils, **D** is the mean coil diameter and **G** is the shear modulus for the spring material.

34 RANKING CARDS

List items related to a topic in order of importance.

This activity works well for a revision lesson or at the end of a series of lessons on a topic; the learners need to know something about the topic before you start.

Individual work
Learners or the teacher first write down ideas, concepts or facts about the topic individually; each of these must be written on a different card. Learners then mix up their sets of cards and spread them on the table face down. They then select two cards at random and discuss *which is the most important*. They put this one on the left. Learners then take a third card and compare it with the card on the right, asking the question Which of the two is more important? They place it on the appropriate side and continue until their cards are used up, thus creating a row of cards with the most important idea on the left, and the least important idea on the right.

Pair work
Once both learners have constructed their own lists, ask them to compare the lists and construct a new, combined list using the same procedure.

History: the Industrial Revolution
Per card, learners write down one invention made during the industrial revolution (for example: flying shuttle, spinning jenny, spinning mule, cotton gin).

They then rank them, answering the question *Which of these inventions has had the greatest impact on people's lives and why?*

35 JIGSAW READING

Different learners read different information, then exchange the information.

This task works well with a text which can be divided into 3-5 sections, each of which contains separate information about the same topic.

1 Divide the class into groups of four learners, ABCD.
2 Divide your text into four sections.
3 Give each individual in the group a copy of a different part of the text. Provide a task related to each section of the text. Learner A gets text A, learner B text B, and so on.
4 Provide a new task which requires the four learners ABCD to communicate about what they have just read.

History: the Reformation

This is an example (based on Walsh, 2004) of learners becoming experts on one part of the course book unit about the Reformation. The teacher divided the unit into sections and the class into groups. Each group was given different questions to answer or tasks to do:

Group 1: pages 30 and 31: 'Medieval reformers'
Make a list of concerns about the Roman Catholic Church during the Middle Ages.
What made the spreading of new ideas about the Church easier?

Group 2: pages 34 and 35: 'Luther'
Make a list of the events which happened between the time of Pope Leo X and Luther.
Make a list of events which happened between the time of Emperor Charles V and Luther.
Why did the ruler of Saxony support Luther?
Which role did propaganda play in the struggle between the Pope and the Emperor on one side and Luther on the other side?

Group 3: pages 36 and 37: 'The Protestant Reformation: Europe divides'
Look at the map on page 37: To which country did the Netherlands belong?
What was the main religion in the Netherlands?
What can you say about the size of the Netherlands during the 16th century?

Group 4: page 36: 'Protestant Europe'
Who were more attracted to Protestant ideas?
Why were they more attracted to these ideas?
Make a table in which you give information about the two groups of Protestants: Lutherans and Calvinists.

Group 5: pages 38-39: 'The Pope strikes back: The Catholic Reformation'
Why did the Pope call for the Council of Trent?
List the main points from the Council of Trent.
What was the Inquisition?
What was the consequence of the Council of Trent?

After they had answered the questions in groups, the groups exchanged information. Then, five new groups were formed, each containing one expert on a different section. The new groups had to create a summary of the whole chapter, answering the questions, "Who were the most important people during the Reformation, and what were the most important events?"

36 GRAPHIC ORGANIZERS

Learners organise information on paper.

A graphic organiser is a visual representation of information. It can be used to help learners manipulate - understand or transform - information into another form. For example, a tree map can help to categorise information, a bubble diagram to show sub-topics within a main one, a Venn diagram to compare and contrast, a time line to put events in chronological order.

Observation, listening and reading guides are types of graphic organisers: they help learners to organise or change information.

All subjects

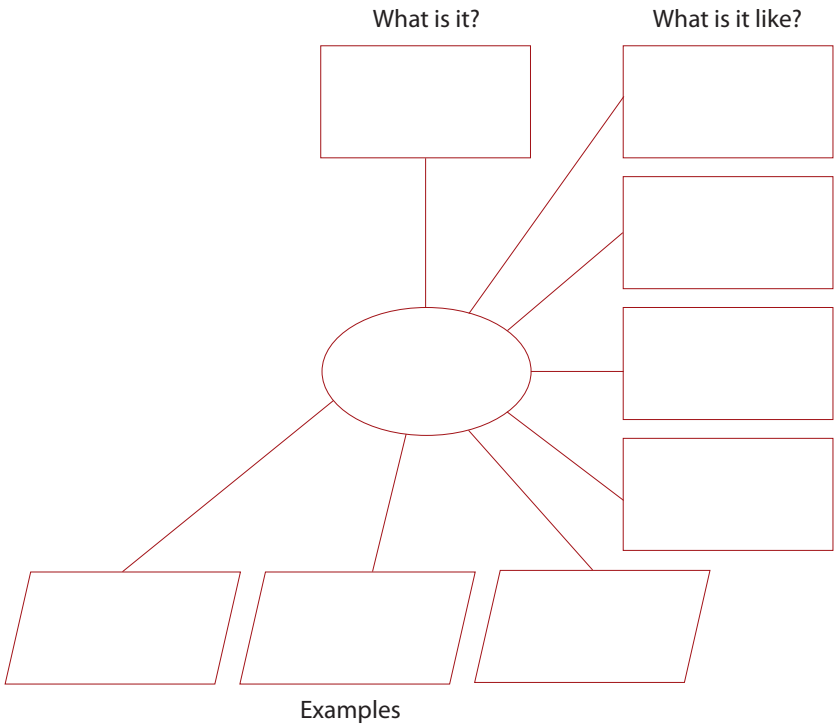
- Give learners empty or half-completed graphic organisers, and ask them to complete them during reading or listening tasks. Differentiate by giving quicker learners an empty graphic organiser and slower learners a half-completed one.

History: timeline

Create a timeline using the Teach-nology website and ask learners to complete it: www.teach-nology.com/web_tools/materials/timelines

History: concept map

Concept maps work well to help understand complex ideas. Write the concept (e.g. Imperialism) in the middle of the map and ask the learners to complete the rest.



37 STICKERS

Play a sticker game related to difficult concepts.

This fun activity interests a class in (less exciting) material and is useful for revising difficult concepts.

1 Hand out one page of information about the topic that you want the learners to work with, e.g. a text with a drawing or diagram. Ask them to read it quickly in about five minutes.

2 Give each learner one small white sticker (6 x 3 cm). They choose and write ONE concept that they feel the class should know on their sticker. Collect the stickers.

3 Stick one label on to each learner's back, without telling them what it is.

4 Learners circulate around the classroom, asking each other YES/NO questions ("Am I an A?" "Am I related to B?""Am I found in C?") to discover what their own label reads. For each question a classmate asks, they write an X on that classmate's label.

5 Once they have discovered their concept, they move the sticker from their back to their front, but keep on answering other learners' questions.

Biology: hormones

1 A list of hormones and their functions can be found on www.emcom.ca/primer/list.shtml.

2 An illustration of glands can be found on training.seer.cancer.gov/module_anatomy/unit6_3_endo_glnds.html.

Examples of cards:

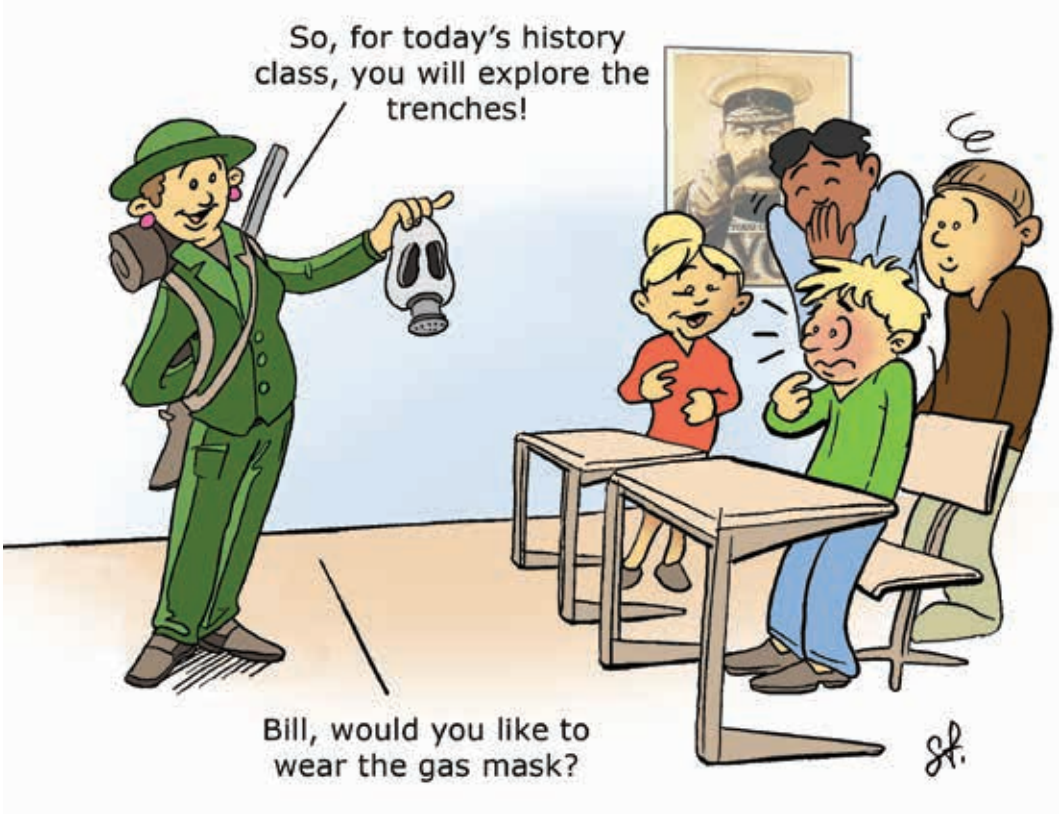
Prolactin	**GH**	**Cortisol**

Questions learners can ask each other:
"Am I a hormone?"
"Am I related to pregnancy?"
"Do I function in the kidney?"

As a second step, learners can stick their labels on the board, after which a few learners create a mind map with all the concepts.


4

4 Encouraging speaking and writing in CLIL



This chapter covers:

- *output* and its importance in CLIL;
- output-related challenges for CLIL learners;
- the importance of negotiation and interaction;
- BICS and CALP: the *mode continuum*, from speaking to writing;
- encouraging learners to speak and write English in the CLIL classroom;
- scaffolding spoken and written output;
- practical CLIL classroom activities to encourage spoken and written output.

INTRODUCTION

Helping learners write well organised or well thought out essays or laboratory reports, or seeing them put energy into a role-play or PowerPoint presentation can be extremely rewarding for the CLIL teacher. At these moments, the learners enthusiastically show their understanding and learning. This chapter is about encouraging output, in other words about getting learners to speak and write. We define output as *the production of language and content in the target language*. Output can be linguistic or non-linguistic, and formal or informal. Examples of linguistic output are a presentation, answers to spoken or written questions, a lab report, an e-mail to an exchange student or a class discussion about what learners did at the weekend: these all involve producing language. Examples of non-linguistic output are a model, a painting, a sculpture or, in the cartoon above, a freeze frame of a scene in the First World War trenches in Bill's lesson: these forms of output require learners to produce something other than language.

In CLIL, the production of output is vital for learners to process and deepen their understanding of content and their ability to use language effectively. This chapter covers different types of output as well as effective ways for teachers to encourage interaction and output.

What types of output do you ask your learners to produce? What kind of content output do you encourage? What kind of language output do you require? Which non-linguistic output do your learners create?

10 Different types of output

1 In the left-hand column of this table, write a topic you deal with in your subject.
2 In the following columns, note down the content aims, language aims, content output, language output and non-linguistic output for the topic.

Example 1: A history lesson on the Crusades
Example 2: A maths lesson on multiplication

Topic	**Content aims**	**Language aims**	**Content output**	**Language output**	**Non-Linguistic output**
The Crusades	Learners know key events in the Crusades. Learners understand the causes and consequences of the Crusades.	Learners notice past tenses of irregular verbs (e.g. built, fought). Learners become familiar with words that indicate frequency of events (e.g. *often, usually, always*). Learners recycle subject-specific terminology (e.g. *pilgrimage, atrocities*).	Learners can answer these questions: When were the Crusades? What were the Crusades? Who went on Crusades? What were the causes and consequences of the Crusades?	Learners give a presentation about the Crusades to the King of England, explaining why they need 10,000 more men. Learners write a letter home about a day in the life of a Crusader.	Learners create a painting or picture of the Crusades. Learners design an emblem of specific Crusaders.

Multiplication	Learners can multiply rapidly and accurately.	Learners notice third person singular in simple present tense (e.g. 6 times 5 equals 30). Learners become familiar with the pronunciation of numbers.	Learners roll two dice and multiply the numbers they see.	Learners say the multiplication sum aloud to the rest of the class, a neighbour or group members.	Learners write the numbers of the dice on the board in mathematical symbols e.g. 6 x 5 = 30.

CASE STUDY

In this biology lesson, the teacher encourages learners to produce spoken as well as non-linguistic output. The lesson is for first-year CLIL learners (13/14-year-olds). The lesson demonstrates the concept of homeostasis through the glucose-regulating role of the pancreas in the blood.

Content aims:

- learners can demonstrate their understanding of homeostasis.

Language aims:

- learners can give an oral presentation about the process of homeostasis
- learners know and use words related to the process of homeostasis.

"In the output (speaking) stage of the lesson, I put learners in groups of four and gave each a pile of Lego bricks representing food entering the body. The white bricks represent glucose in the food. Lego horses represent the messengers the body sends to different organs to maintain the sugar balance. I gave each of the four learners a role: digestive system (stomach), transport system (blood), pancreas or liver. They then had to use the Lego bricks to explain to each other how the body maintains its blood sugar levels. First they practised in groups, and then presented the process to the class.

Learner A: (stomach) **I am the digestive system. The food (holds stuck together coloured Lego bricks) enters the stomach, and I break it down into different bits (gives broken up bits of Lego to circulatory system - learner B).**

Learner B: (blood) **I am the circulatory system. I transport the different bits, including the sugar (white Lego bricks) around the body (gives white bricks to pancreas - learner C).**

Learner C: (pancreas) **I am the pancreas. I notice that there is a lot of sugar in the blood. I send insulin (a brown Lego horse) to the liver to say that there is a lot of sugar in the blood (gives brown horse to liver- learner D).**

Learner D (liver): I am the liver. The insulin makes me (and the muscles) store the sugar (puts white lego bricks on brown horse).

Learner C (pancreas): I am the pancreas. I notice that there is very little sugar in the blood. I send glucagen (white horse) to the liver (gives white horse to liver - learner D).

Learner D (liver): I release some sugar into the blood (takes white Lego bricks from brown horse and gives to circulatory system - learner B)."

Figure 4.1 Description of a speaking activity in a biology lesson

WHY IS THIS CLIL?

This is a good example of how a CLIL teacher can help learners understand a process using props or real objects. Having learners use Lego bricks to enact homeostasis with concrete everyday objects makes the whole process less abstract. Physically enacting homeostasis as they talk about it makes learners remember the process more easily.

Describing aloud what they are doing will also help learners remember the necessary vocabulary: they have to search for the right words as they speak. Activities which make learners explain what they are doing help them learn both content and language. Moreover, as learners present their model, they may notice inconsistencies in what they are saying if they see confusion in their peers' faces. This will help them self-correct their explanations, either in terms of language, or in terms of content. The teacher may also notice errors in their understanding of the content or their use of language and take the opportunity to give feedback on either.

BACKGROUND AND THEORY

1 TYPES OF OUTPUT

Output can be linguistic or non-linguistic, formal or informal, spoken or written, and individual, pair or group work. Some activities that encourage output are: a geography teacher asking learners to draw a map, a debate in a social studies lesson, a teacher having an informal chat in class about an exchange, a science teacher asking learners to write a lab report, learners creating a warm-up exercise in PE and a history teacher setting learners an essay task.

Figure 4.2 shows more examples of spoken, written and non-linguistic output which can be used to encourage learners to produce output in the target language.

Informal and formal spoken output	Non-linguistic output	Written output
- individual, pair or group presentations - a conversation with friends - a chat with exchange students - a debate - an elevator *pitch* - a discussion - a description of a picture - an instruction - an explanation of a problem - a role-play - a radio or television show - a speech - an interview - a film	- a drawing - a graph - a sculpture - a model - a painting - a *freeze frame* - an emblem - an illustration for a book or cd cover - a map - a game - a picture - a technical design - a diagram - an experiment - a storyboard - a physical exercise - a poster - an animation - a musical composition	- an essay - a lab report - a summary - a poem - a travel brochure - a letter - a leaflet - a (short) story - an analysis of an experiment - a play script - a manual - an e-mail - a questionnaire - a survey - a biography - a website - a magazine - a poster - an extract of a journal - a newspaper - a blog - an article

Figure 4.2 Examples of formal and informal spoken, written and non-linguistic output

2 WHY OUTPUT IS IMPORTANT IN CLIL

To become effective users of a language, learners need opportunities to try out newly-learned language forms or subject-specific vocabulary. Encouraging learners to produce spoken or written output helps them to think through ideas, to express ideas, to share knowledge, to give feedback, review ideas, to adapt and refine ideas and to negotiate solutions. Producing output should be an interactive process in which learners are gently pushed to try out, correct and improve what they say. It is inevitable that learners sometimes make mistakes or fail to make themselves understood when using the target language. This is all part of healthy language learning.

Having to work at getting their meaning across helps learners better to understand what they are trying to say as well as to improve their language skills. Output is also important with regard to content: asking learners to explain or formulate their ideas helps them check their understanding. This way, gaps in their understanding become clear to them and the teacher. Language and ideas develop hand in hand: language needs content and content needs language.

The harder learners have to work to articulate something, the more likely it is that the concept will be stored, and the more easily they will be able to retrieve it when needed. Teachers that encourage learners to produce a great deal of output promote both language and content learning.

3 THE TYPES OF DIFFICULTIES CLIL LEARNERS EXPERIENCE WITH OUTPUT

What types of issues have you come across in trying to encourage your learners to produce output? These quotes illustrate some issues related to producing language output.

My Dutch students have to think harder when speaking English.

My pupils find it hard to write a lab report using scientific language.

There is no real incentive for my students to speak English.

My third-year learners write like they speak; they make so many mistakes. I just don't know where to begin.

If I put learners in groups, they end up talking about everything except the subject I asked them to discuss.

When I ask the learners to discuss their answers in pairs, they just start chatting in Dutch.

My students just won't speak enough English to each other. It's so frustrating. There are no consequences for those who do not try to speak English all the time.

Figure 4.3 Issues related to producing language output in CLIL classrooms

There are many different reasons why learners may not speak English in class:

- it feels unnatural to them to use English all the time;
- their vocabulary is too limited to complete specific tasks;
- it is easier to say something in their first language;
- teachers allow them to use the first language;
- learners do not actually need to speak English to complete a task;
- learners do not feel skilled or confident enough to speak;
- learners feel embarrassed speaking English with peers;
- learners do not need to talk to each other in order to carry out the task.

These are some reasons why learners may find it difficult to write in English:

- learners have no ideas to write about;
- learners have no audience in mind when writing;
- learners write as if speaking, as they are not aware of the aspects of formal language;
- learners do not know how to express their ideas in English;
- learners do not know how to organise their ideas;
- learners are afraid of making language mistakes.

This chapter addresses the issues CLIL teachers encounter when encouraging learners to produce spoken and written output and offers suggestions on how to deal with these.

4 CUMMINS' QUADRANTS AND ENCOURAGING SPEAKING AND WRITING IN CLIL

Teachers often note that learners seem to be fluent in general conversation but find it difficult to produce more academic language, for example, when they need to write an essay about communism for history or to explain an experiment for physics. CLIL learners need to master many different kinds of spoken and written output.

Cummins' Quadrants (also see Chapters 2 and 3) can help CLIL teachers understand learner difficulties.

The quadrants can be used to identify and develop appropriate tasks, ranging from activities in which learners use *external clues* and information to show their understanding, to situations where external clues are absent and learners can only rely on their knowledge of language and content to carry out the assignment.

The quadrant below uses a geography lesson about climates as an example.

<table>
<tr><td colspan="5">ACTIVITIES FOR ENCOURAGING OUTPUT WHICH NEED LESS THINKING</td></tr>
<tr><td rowspan="2">A LOT OF CONTEXT</td><td>Quadrant 1
Output supported by lots of visuals and day-to-day language.

Learners write descriptions of different climates under a map showing weather symbols.

Learners give a PowerPoint presentation with pictures of a continent and describe the climate.</td><td>Quadrant 2
Output with little context, which can be produced without much effort, using day-to-day language.

Learners describe different climates in a short text with no illustrations. Readers have to name the country that matches the description

Learners give a short presentation about the climate of a country, without any illustrations. Listeners have to guess which country is being described.</td><td rowspan="2">LITTLE CONTEXT</td><td rowspan="2">B
I
C
S

C
A
L
P</td></tr>
<tr><td>Quadrant 3
Output supported by a lot of context but the activities need deeper thinking and more abstract language.

Learners compare climate graphs of different countries and present their comparison to the class.

Learners write a text comparing climate graphs of different countries. Readers choose which country they would most like to live in.</td><td>Quadrant 4
Output with very little or no context; activities need deeper thinking and abstract language.

Learners write an essay comparing and contrasting the climate in six European countries.

Learners participate in a debate about climate change arguing for or against government intervention.</td></tr>
<tr><td colspan="5">ACTVITIES FOR ENCOURAGING OUTPUT WHICH NEED DEEPER THINKING</td></tr>
</table>

Figure 4.4 Cummins' Quadrants applied to encouraging output

11 Learning activities to encourage speaking or writing

The table below contains learning activities that encourage speaking and writing in CLIL. In which of the four quadrants would you place the following activities?

	Activity	Quadrant
1	Name and label the parts of a human skeleton	
2	Participate in a debate on nuclear energy	
3	Write short instructions for a simple chemical experiment	
4	Show a picture of a painting and give a short presentation about it	

5 THE MODE CONTINUUM

The mode continuum is a way of distinguishing between BICS and CALP. Gibbons (2002) describes the development from "more spoken-like texts to more written-like texts" and shows that cognitive development and language learning go hand in hand. This is useful for CLIL teachers because it shows how language is used differently in different contexts. The texts in figure 4.5 all discuss magnetism, but the type of language used is different.

Text A: (spoken by three 10-year-old learners during an experiment with magnets, using gestures)
This… no, it doesn't go... it doesn't move.. try that…yes, it does, a bit… that won't … won't work, it's not metal … these are the best… going really fast.

Text B: (spoken by one learner about the experiment with magnets, after the event)
We tried a pin… a pencil sharpener, some iron filings and a piece of plastic … the magnet didn't attract the pin.

Text C: (written by the same learner)
Our experiment was to find out what a magnet attracted. We discovered that a magnet attracts some kinds of metal. It attracted the iron filings, but not the pin.

Text D: (taken from a children's encyclopaedia)
A magnet is able to pick up, or attract, a piece of steel or iron because its magnetic field flows into the magnet, turning it into a temporary magnet. Magnetic attraction occurs only between ferrous materials.

Figure 4.5 The mode continuum. Source: (Gibbons, 2002, p. 40)

These four extracts illustrate how language gradually changes from spoken to written English. They also clearly show the difference between informal spoken language and more formal written language.

In Text A, the learner uses day-to-day language and many clues that point to the actual object (*this*, *that* and *these*). It is a good illustration of BICS that would be placed in Quadrant 1.

In Text B, the language is clearly changing: the learner informs fellow classmates about an experiment. There are fewer clues, so the learner needs to use different language to explain what the experiment was all about. It would be placed in Quadrant 2.

Text C is a written text, so there is no face-to-face audience. The writer uses more formal language to describe the context and the experiment. This text would be placed in Quadrant 3.

Text D has been taken from a children's encyclopaedia. It contains more complex sentence structures and subject-specific terminology to describe the experiment. Text D is an example of CALP that would be placed in Quadrant 4.

6 HOW TO GUIDE LEARNERS TO PRODUCE MORE CALP

In the first year of CLIL, teachers can set up tasks that allow learners to develop BICS - more informal, day-to-day language and basic vocabulary. During the second and third years, they can start challenging learners to produce more academic language, so that their language moves towards CALP. This is done by providing more challenging tasks which require more formal linguistic and non-linguistic output.

Learners have two needs. Firstly, they need to be able to show what they know about the subject, with or without language. Secondly, they need to be pushed to develop their language skills, and use more complex language to express complex ideas. Teachers need to balance both these needs. They can do so by providing more or less context and more or fewer clues, or by making tasks intellectually more or less demanding. To help learners show what they know about the subject, try providing a list of words or phrases that they can use in a task, or encouraging them to use visuals. To help learners develop more academic language, try making tasks more intellectually demanding. In this way, teachers can guide their learners to move from BICS to CALP.

Quadrant 3 is essential for CLIL learners because here, language and academic requirements gradually become more demanding. However, in this quadrant learners still need the support of some context to carry out the assignments. To move from BICS to CALP, learners need *scaffolds* that encourage and help them to speak and write in the target language.

To develop CALP, learners need both higher language proficiency and academic ideas. This is one reason why CLIL has the potential to be a powerful environment for language learning: it provides an opportunity to develop both language and thinking skills. However, this development will not just happen on its own – it requires teachers to support learners. For example, if learners are asked to write a lab report for physics, the CLIL teacher can support them by demonstrating how the passive is used in lab reports. This is an example of language scaffolding. To perform a cognitively more demanding task effectively, learners are helped best if they are provided with academic language. Otherwise, learners may continue to experience difficulties writing essays and lab reports; they will complete these tasks without using appropriate academic and scientific language.

Teachers that pay attention to language will find learners performing better at content level, because it helps them to express ideas more carefully. Learners that are pushed to use more academic language will also gain a deeper understanding of the subject, because the development of language and ideas is interdependent in their first and second language.

APPLICATIONS IN CLIL - TEACHING SPEAKING

1 NEGOTIATION OF MEANING IN SPOKEN INTERACTION

Group and pair work offer effective opportunities to use language, as learners get more chances to speak than in a whole-class setting. Encourage output by setting tasks which require learners to communicate with each other in the target language. This process is called *negotiation of meaning*. By interacting and receiving feedback from others, learners will discover the appropriateness and correctness of their content and language, and will be able to judge whether or not they have been understood.

Example 18 is an illustration of negotiation of meaning in physical education. In this task, learners are asked to write and give oral instructions to fellow learners for warm-up tasks. The learners are really communicating here, since the class has to follow the spoken instructions. If these are not clear, the learners cannot carry out the tasks. By giving instructions as they carry out the activity, learners process the language and the content at a deeper level, since the effect of their instructions are immediate. It is more than just instruction by peers, because the learners will adjust what they say if their instructions do not produce the result they expected. This means that they are more likely to remember and reproduce both the information and the language at a later stage.

18 A warm-up activity for physical education

Prepare a warm-up activity that lasts about 10 minutes. Choose a sport that you enjoy, know a lot about or one you've done in PE lessons here at school. Don't forget to include the three different types of warm-up (see below). For each type, write down a few exercises and mention the length of each activity. You are also allowed to use illustrations.

Do this assignment on the computer. Remember to put your name and class on the paper and be ready to actually give the warm-up instruction to your classmates next week!

Extra information about a warm-up

1 General warm-up

A warm-up always starts with a part to warm up your whole body. Exercises in such a general warm-up are activities such as running, skipping, knee lifts, going sideways, swinging your arms, and rope skipping.

2 Stretching

Stretching is done to lengthen your muscles to prevent injuries. When choosing exercises, you need to decide which muscles are mainly used in this sport and how you can stretch them. Each stretching position is usually held for 6-8 seconds and you repeat it a couple of times.

This picture is an example of a stretching exercise for your upper thigh muscle; this exercise could be used as a warm-up exercise for a football player.

3 Specific warm-up

This is the part of the warm-up that is used to get a feeling of the sport that you are going to practice. If softball is the sport you chose, then exercises might include throwing a softball to and fro, pitching (not at full strength), and swinging the bat loosely.

WHY IS THIS CLIL?

P.E. is a subject that does not require a great deal of written output. This P.E. lesson involves group work with hands-on activities in which learners use the target language in writing and speaking. This is an effective CLIL task because learners experience something (non-linguistic output), and speak and write about it (linguistic output). In doing so, they effectively recycle subject-specific language and content.

Learners are asked to use subject-specific vocabulary. In the instructions, the teacher helps them by giving examples of subject-specific words such as *stretching, upper thigh muscle* and *swinging the bat loosely*. The teacher also supports a key concept (*stretching*) with an illustration. Learners need to use this specific vocabulary to explain their warm-up exercise. They are also allowed to use illustrations in their written task. This provides context, balancing the language and content demands being made on the learner.

The P.E. teacher builds on the learners' existing knowledge, interests and own experiences. The learners have been given specific goals, and the task is organised so that the learners need to use the target language in a realistic and meaningful context. Apart from this linguistic aspect, learners also think about the key content of a P.E. lesson.

The teacher allows learners preparation time for the warm-up activity. This is time CLIL learners need before they produce more output (both language and content). They are not only expected to produce and write

down three warm-up exercises, but also to teach them to their classmates the following week. When the learners carry out this task, they receive immediate feedback from their peers, which is an example of negotiation of meaning. If they cannot do the exercise, the communication has simply broken down!

This exercise illustrates the various types of communication P.E. teachers can set up in their classes. It asks learners to explain (why, how or what to do), instruct (how to do), question (to check for understanding), describe (what is going on) and to analyse (how an activity works).

2 INFORMATION GAP ACTIVITIES

Information gap activities are another way of encouraging effective interaction. These are activities in which each learner in a pair or group has information the other learners do not have (the information gap). The learners interact with each other to share their information and find out what they can from the others, for example to solve a problem or make decisions (Neu & Reeser, 1997). Information gap activities are useful in CLIL because they give learners a reason to speak to each other. This encourages participation from all learners and gives them opportunities to practice their speaking skills (for example, taking turns in conversations, initiating conversations, and giving short and longer answers). Learners need to understand each other's ideas correctly to complete the tasks. There are different kinds of information gap activities: *factual*, *personal* and opinion *information gap activities*.

In factual information gap activities, learners exchange facts (see Activity 44). In personal information gap activities, learners question each other about their personal lives. For example, in a geography lesson, learners create a questionnaire about their favourite European capital city. They then have to discover their classmates' interests using the questionnaire.

In opinion information gap activities, learners need to find out what their fellow classmates think about a certain topic. An example of this type of task is a pyramid discussion. For example, in a social studies lesson, learners individually put a number of criminal offences in order of severity. In pairs, they discuss their lists and make a new list which both learners agree upon. The same can then be done in groups of four, then eight, and finally the whole class. A pyramid discussion like this works best with simple problem-based discussions or item selection tasks.

3 EXPLORATORY TALK

It is important that CLIL teachers create opportunities for learners to practise content language and to show their understanding of content. Learners also need to try out different ways of thinking and exchange and contribute personal ideas to a discussion. Barnes (1992) distinguishes between *presentational talk* and *exploratory talk*. In presentational talk, learners mainly focus on language and the manner in which a speech is delivered and received. In exploratory talk, learners are encouraged to exchange ideas in a critical but constructive way.

Learners discussing ideas may agree or disagree with each other. But a simple yes or no without an explanation why limits language and content learning. If learners simply add ideas without extending them, they do not deepen their understanding. However, if learners make their reasoning more explicit, they learn more (Mercer, 2000). This means learners need to be set tasks which encourage them to explain their reasoning and teach them the necessary language for this.

Group or pair work can encourage exploratory talk; it creates opportunities for learners to use formal and informal language, to use content language and to think out loud or think together. It is through discussing new ideas with others that learners move towards new ways of thinking and content understanding. Example 19 shows a biology task (Bentley, 2007, p.132) that stimulates learners to use content language and requires deeper thinking**.**

19 Speaking cards for biology

In this task, a group of learners is given a set of cards with subject-specific 'fat' questions they need to discuss in their group, for example:

1 Why is the spine made up of small bones?
2 Why are birds' eggs speckled?
3 A spider isn't an insect. Why not?
4 Where can you see water evaporate?

Learners take turns choosing a card and discuss the question in their group. This activity helps them use the subject-specific terminology they have learned, promotes understanding of subject-specific concepts and also encourages the kind of talk Mercer describes; learners need to reason out loud. (For information on fat and skinny questions, see Chapter 3; for effective questioning, see below).

In encouraging exploratory talk, teachers can guide their learners towards good quality group talk (see Activity 45). It is advisable to set up ground rules for effective group talk which can be referred to when learners are engaged in discussions. Dawes and Wegerif (1998) suggest the following ground rules:

- everyone should have a chance to talk;
- each member of the group should be asked:
  - what do you think?
  - why do you think that?
- look at and listen to the person talking;
- show respect for other people's suggestions;
- after talking, the group should reach agreement and formulate their arguments.

4 EFFECTIVE SPEAKING TASKS

Learners are encouraged to produce a lot of spoken language output when speaking activities are set up in such a way that "learners talk a lot, participation is even, motivation is high and language is at an acceptable level" (Ur, 1996). The following suggestions can help make your speaking activities more effective:

1 Create a safe environment
Learners should not be afraid to make mistakes when asked to produce output. Create a learner-friendly atmosphere in which all learners can safely participate at their own level. This is best done by having learners speak or write in pairs or small groups and helping them to see mistakes as learning opportunities.

2 Choose the topic carefully
Make sure the chosen topic is of interest to learners. The more they are interested in the topic, the better their motivation to speak will be.

3 Plan and structure interaction well
Make sure learners understand the instructions and tasks. It is important to be specific. Tell learners exactly what is expected of them, what the product should be, when it needs to be finished and what they will be assessed on. Learners also need preparation for producing spoken output. Just stating *Here's the topic, now talk* overly challenges the learners and will probably not lead to an effective discussion. Chapter 1 stressed the importance of activating prior knowledge. Before any speaking activity, teachers first need to take time to introduce the topic and to provide content, language and scaffolding as preparation.

4 Use a *no-hands rule* and give learners time to Think, Pair, Share
If you only ask learners with their hands up to respond, quieter learners are left out. Instead, give

learners time to think of an answer individually ("think") and then to discuss their answers in pairs ("pair"). Then select who is going to give an answer ("share"). This gives all learners time to think, which is particularly important in CLIL, where learners need to think about both content and language. All learners should get a chance to answer the questions, not just the ones who volunteer. More thinking time may also lead to more and longer responses. Having a no-hands rule prevents the 'talk talk loop' in which teachers speak without any response from the learners, forcing them to continue, which in turn discourages learner participation and increases teacher talk.

5 EFFECTIVE QUESTIONING

Chapter 3 we covered the difference between fat and skinny questions. This section focuses on questioning as a means to encourage more language and content output.

Skinny questions produce limited output of up to five words. When a physics teacher asks *Is solar energy a good thing?* learners will probably produce a one-word answer: *Yes* or *No*. Fat questions require answers with more than five words, generating more complex language and content output. The question *Why is solar energy a good or bad thing?* requires learners to produce longer stretches of language as well as to think at a deeper level.

There is a thin line between fat or skinny questions that guide understanding and ones that encourage output, but there is a difference in emphasis. Fat questions for guiding understanding are open questions about a written or spoken text. They are designed to check and support learners' understanding of the text. When fat questions are used to encourage spoken output, learners are asked to demonstrate their understanding of content and language creatively in different or new situations. This results in learners processing information in a new way, so that it is stored and retrieved more effectively and more easily. Asking fat questions encourages *transfer*, since they lead to learners using information and language in new situations and in different contexts.

The way teachers ask questions or listen to learner responses is crucial to the effectiveness of their teaching. The following task is designed to start you thinking about the types of questions teachers ask in their lessons.

12 Fat or skinny questions?

List the different types of questions you ask in your lessons and/or find in your course book. For each question, write down whether it is a fat or skinny question and whether or not it encourages output. Two examples have been provided.

Subject	Question	Fat or skinny question?	What language output is encouraged?	What content output is encouraged?
History	Why did commu-nism in the Soviet Union collapse?	Fat	Spoken or written Explain a process	Learners need to demonstrate understanding of the collapse of communism in the Soviet Union
Biology	What is another word for a living thing?	Skinny	Spoken or written Give a synonym	Subject-specific vocabulary

6 SUGGESTIONS FOR EFFECTIVE QUESTIONING

Here are some suggestions for asking more effective questions.

1 Prepare questions that get learners thinking in advance.
A whole-class discussion can be fruitful if you prepare questions in advance to take up or extend learners' responses. You can also allocate talking groups to further discuss answers and to encourage learners to produce more language and content output.

2 Start an activity, a task or a lesson with a controversial question.
In social studies, you could ask a question related to an important issue in today's lesson, such as *Capital Punishment: Yes or No? And why (not)?* Learners work in small groups, discussing their ideas to come up with a group answer and produce more content and language output.

3 Stimulate higher-order thinking skills.
To develop higher-order thinking skills, ask different kinds and levels of questions (see Chapter 3) and use more fat questions. For example, *What do you think the effect might be of increasing the speed limit?* This stimulates learners both to formulate a variety of answers and to be creative in their language use.

4 Ask learners to produce their own questions. An effective way to involve learners is to ask them to produce their own spoken or written questions and answers about a specific picture or source.
Next, they can discuss their answers with fellow classmates. This activity gives learners the opportunity to produce written output and encourages much deeper thinking about the given source or picture.

5 Play devil's advocate.
Sometimes, a useful intervention is to play devil's advocate in a class discussion, deliberately taking an opposing or contrasting viewpoint to spur on the conversation.

20 Creating questions for history

A well-balanced mix of lower and higher order thinking skills questions can be found in this example described by Fisher (2002).

A history teacher reads a story to his class about Tudor England. Learners are asked to note down one question about something that they found interesting or puzzling about the story. They are then asked to discuss their questions in pairs and decide whether to put forward both questions to the whole class, or to combine them into a one new question. Questions are collected on the board by the teacher. The class sorts out which are factual and which are philosophical questions. The class then chooses one philosophical question and debates it.

WHY IS THIS CLIL?

This activity encourages learners to come up with their own lower and higher order thinking questions, and to produce not only language output but also content knowledge. The language output for producing the philosophical questions is more cognitively and linguistically challenging, which develops CALP.

7 TIPS FOR ENCOURAGING LEARNERS TO SPEAK ENGLISH

Although CLIL learners are encouraged to speak English all the time, teachers complain: *They just won't speak enough English to each other. It's so frustrating!* This section offers a number of practical suggestions for CLIL teachers to encourage their learners to use English in class.

School policy

- Make clear to learners, teachers and parents that English is the language of instruction and communication in the bilingual stream. Some schools have explicit policies on this issue. For example, learners who speak English all the time may be given bonus points. However, learners who consistently 'forget' to speak English in class receive a yellow card. After having been given five yellow cards, they are asked whether they want to reconsider staying in the bilingual stream. The learner and parents are invited to school to discuss this with the CLIL co-ordinator. Such a policy attaches clear consequences to the consistent failure to speak English. Other schools ask learners to speak English in front of the class for one minute whenever they slip back into Dutch, or to wear a "silly hat" for the rest of the lesson. Some schools are less strict; they may include a remark or score on report cards related to the use of English in subject lessons. A single solution that applies across the board does not exist, and the culture and context of the school influences which policy is most appropriate.

Role of teacher

- Teachers are role models. If you speak English all the time, learners are more likely to do so too. Teachers can ignore or refuse to respond to Dutch (*I really can't understand you*). As with most educational issues, consistency is key.
- The teacher can give rewards for speaking English all the time. Possible rewards for a whole class include:
  - No Dutch used for one lesson: listen to favourite song in class.
  - No Dutch used for one week: watch favourite video clip in class.
  - No Dutch used for one term: watch favourite DVD in class.
- A more negotiating style could involve very explicitly discussing the issue with learners: *What stops you from speaking English? What do you think the problem might be? What shall we do if you don't speak English? How can I encourage you to speak English? Why don't you want to use English?*

Activating

- Support learners by providing useful phrases in English. Display these on the wall, or hand them out on cards.
- Give learners thinking and/or planning time before you ask them to produce language.
- Think about the language that learners need to produce for an activity and select an activity that fits the ability of the learners in your class. For example, contributing to a debate is much more difficult than answering structured questions.
- Have a short chat at the start of the lesson about something related to your topic. This warms up the class and sets the tone for speaking English for the rest of the lesson.
- Ask some learners to give an example before they start to work on a task.
- Think about the language aims for a CLIL lesson. What should learners be able to do in English at the end of the lesson? Tell the learners what the language aims are.
- Design and incorporate language assignments (plays, short stories) into CLIL lessons.
- Make a glossary or word file and use any newly-introduced vocabulary in the next lesson.
- Be explicit about language expectations when you set a task, for example *use these words, ask only open questions,* and *use the word 'because' five times*.

Group work

- Use pair work often and set learners tasks that include an information gap.
- During group work, give some of the learners a monitoring role to keep groups working in English. Have another learner note the mistakes and another useful vocabulary or phrases.
- Give learners speaking homework. Ask them to prepare a one-minute talk for the next lesson.
- Record the pair or group work on a mobile or digital voice recorder and analyse it.

Praise and penalties

- Give learners lots of encouragement and praise when they use English.
- Give learners a 'free' 10 for one of their tests; if they speak Dutch or don't participate, they lose half a point.
- Each time learners speak Dutch, fine them 5 eurocents. At the end of term, buy something nice or donate the money to charity.
- Give an extra mark for good participation or a good contribution in English. Include a mark for English (5-10%) in tests.

Assessment

- Assess learner work on both content and English, so that learners feel credited when they use English (also see Chapter 5).

Projects

- Work with the English teacher on a *cross-curricular project*; make sure that a substantial part of the mark is for English (also see Chapter 6).

8 SCAFFOLDING SPOKEN OUTPUT

Chapter 3 discussed scaffolding as a tool to help learners move forward in their learning and understanding. Scaffolding can also be used to support learners in producing more formal spoken output.
A production scaffold is a task where learners produce or create something new to show their understanding. Production scaffolds requires higher-level thinking than reception or transformation scaffolds. Teachers can use them to help learners move smoothly from BICS to CALP and thus become more autonomous learners. Production scaffolds also help learners structure their thoughts and language.

9 SPEAKING FRAMES

In the first years of CLIL, learners may well be too shy at times to express themselves in English, and their vocabulary may still be too limited or their command of specific grammatical structures insufficient. This sometimes makes learners too afraid to talk or even leads them to avoid the target language and fall back on their first. Providing language support can help learners overcome their fear of speaking. Support them with specific vocabulary or phrases they can use to practise sentence patterns.

21 Speaking frames for geography

A geography teacher asks learners to work in pairs. The learners study a map of Europe and arrange countries on a time line in the order in which they would be affected by a rising sea level.

2010 2030 2040 2050 2060 2070 2080

The content aim of this exercise is to show understanding of sea level rise, and the language aim is to learn and use subject-specific terminology (such as altitude and above/below sea level), to draw attention to words indicating order (first, second, third) and to help learners notice degrees of comparison (more, less, higher and lower).

Learners use an atlas to do this assignment. They take turns looking at the map and putting a country on the timeline. The teacher also provides the following *substitution tables*.

Substitution table 1

The country	most least	affected by the rise of the sea level will be	….	because it	is	high low	above below	the sea level

Substitution table 2

…….will be the	first second third fourth fifth	country to	be affected by suffer from see the effects of be flooded because of	the sea level rise

Such substitution tables enable less proficient language learners to produce spoken output. More examples can be found at: www.factworld.info/Ethical_English_Activities.pdf

In an activity like this, learners get many external clues; the task can be done without much thinking. The language aspect provides learners with ready-to-use chunks of language. These substitution tables are best suited for learners who are still at BICS level and who would not be able to complete this task without assistance. The tables get learners started in a second language and "reduce the frustration of being unable to participate in classroom tasks that they are capable of doing in their mother tongue" (Gibbons, 2002).

Substitution tables do not guide learners to use new language in a different way. Once learners have passed the silent 'survival' stage, they can be guided to become more proficient and independent users of the target language. By this stage, the tables should no longer be used: learners must start making efforts to find the language they need themselves.

22 Production scaffolds for history

In a history lesson, learners watch the film *Elizabeth*. Each learner is given a specific role card in advance, and is instructed to study one character in the film. While watching, the learners make notes on their character.

Role card 1: You are William Cecil. Tell your classmates why you were Queen Elizabeth's most faithful servant. Tell them you kept tight control over the finances of the Crown. Tell them about your religious convictions.
Role card 2: You are Queen Elizabeth. Tell your classmates why you were declared illegitimate. Tell them why you support the Protestants. Tell them about your foreign policy.
Role card 3: You are Anne Boleyn. Tell your classmates you're Elizabeth's mother. Tell them you were accused of high treason. Tell them about the tragic events in the Tower of London.

After watching, the class holds a balloon debate (see Activity 38) The characters are in a hot air balloon which is running out of gas. Only one character can be saved. All the characters must put forward the reasons why they need to be saved. In groups, the learners prepare to take on their role by using the content and language *speaking frames* below. One member of each group presents the reasons to the class and the class votes for who should be saved.

Frame 1 **Introduction**	**Frame 2** **First argument**	**Frame 3** **Next argument**	**Frame 4** **Conclusion**
First of all... To begin with…. This is how… Having collected all the necessary information…. In order to …	Secondly… Following this... In addition…	You need to know…. Once you have completed… As you….. As a result of….. You will see that …	Finally… Now it is time to…. At the end of….. I have discovered…. I would recommend...

WHY IS THIS CLIL?

The role cards provide a great deal of content support that learners can use to present their argument. Language support is provided by the speaking frames. The presentation requires more abstract language and deep thinking. Learners are asked to work in small groups, interact with each other and make sure they understand each other. Asking learners to give a presentation also allows them to show their understanding of the topic.

The speaking frames guide learners in structuring their arguments, encourage learners to try out newly-acquired vocabulary, and help them produce a more coherent presentation. The role cards provide subject-specific terminology learners can use in their presentation (*declared, illegitimate, foreign policy*). The language frames offer vocabulary to indicate the structure of the presentation (*introduction, first argument, second argument, conclusion*), as well as useful phrases for the different phases of their presentation (*first of all, the next step is, as a result of, finally*).

23 Production scaffolds for geography

In geography, learners are expected to use subject-specific terminology and factual and formal explanations when talking about topics such as global warming, rainforests and climate change. Below is a worksheet one geography teacher uses to help learners understand the causes and effects of an earthquake.

Instructions

A **cause** is something that makes something else happen. Of two related events, it is the event that happens first. To determine the cause, ask yourself the question *Why did it happen?*

An **effect** is what happens as a result of the cause. Of two related events, it is the one that happens second or last. To determine the effect, ask the question *What happened?*

Exercise 1: Phrases

a Match the sentences and phrases in column A with the right endings in column B.
b Mark the cause (red) and the effect (blue) using two different coloured pens.
c Draw a circle around the different words used to express a cause and effect relationship.

Column A	**Column B**
1 The new trains have more powerful engines.	is due to acid rain.
2 The air rises and cools.	so there isn't enough food for the people.
3 The traffic was very heavy and	This is caused by too many greenhouse gases in the atmosphere.
4 Many species of wildlife are becoming extinct	because the rainforests are being destroyed.
5 This year's crop was destroyed by the bad weather,	They are, therefore, faster.
6 The temperature is rising steadily.	as a consequence the rock erodes at the bottom.
7 The waves bash against the rock and	This causes the water vapour to condense into water droplets.
8 Since the volcano emits so much ash and poisonous gas,	because of the melting ice caps.
9 The sea level is rising	as a result I arrived very late.
10 The fact that the rivers are polluted and trees are dying	people have to be evacuated really quickly.

The graphic organiser below is an example of language support to help learners explain the causes and effects of an earthquake and also to encourage them to try out newly-learned vocabulary in a presentation or a debate.

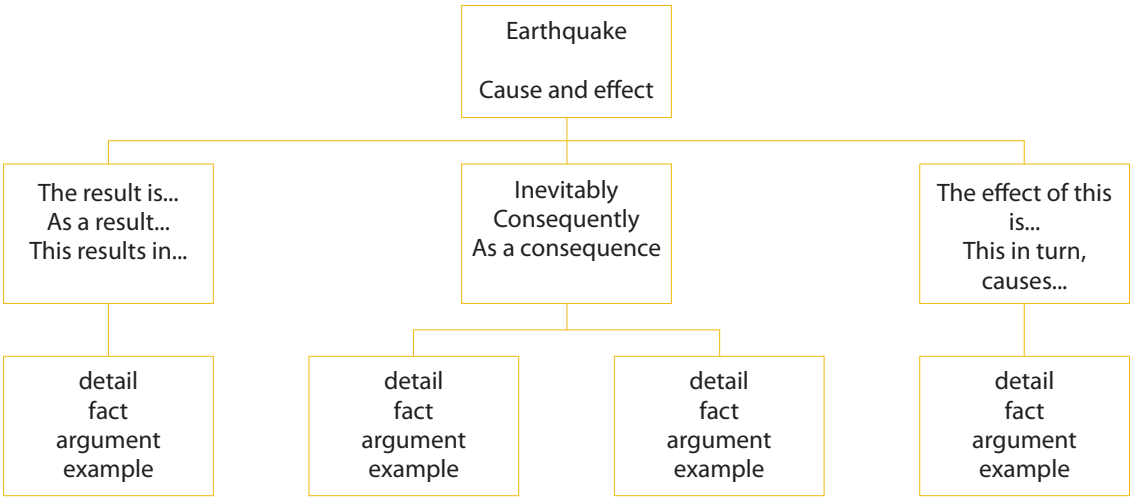


Figure 4.7 Production scaffold: speaking frame for geography

WHY IS THIS CLIL?

This type of graphic organiser is suited for supporting more advanced CLIL learners. It provides phrases they can use to explain a subject-specific topic and guides them in the structuring of their explanation. The language support is not as complete as in Example 23: to help learners become more independent speakers, the language support must be removed gradually.

Many CLIL learners take part in junior speaking contests and debates (see Activity 38). These are good ways of encouraging CLIL learners to use more academic language. After all, in a debate, learners need to find original and intelligent arguments to contribute. A debate also has a competitive element, a clear goal and it gives direction and purpose to a discussion. Moreover, in a debate, learners can demonstrate understanding of subject-specific content and display their language proficiency.

24 Speaking frame for agreeing and disagreeing

This speaking frame provides learners with useful phrases for asking or giving opinions and for agreeing or disagreeing with their opponents in a debate.

Useful phrases to express agreement
I think we should buy a car which runs on vegetable oil.
I believe (that) smoking should be outlawed.
In my opinion...
I feel that it's the right thing to do.

Useful phrases to express disagreement
I don't quite agree.
I don't see it that way.
That's not how I see it.
I would disagree with that.
I couldn't disagree with you more.

Useful phrases to ask for opinion
What do you think?
What's your opinion?
What are your ideas?
Do you have any thoughts on that?
How do you feel about that?

WHY IS THIS CLIL?

This speaking frame supplies chunks of language a learner can use or change in order to perform a task. It helps learners follow the formal procedure of holding a debate, but at the same time allows them to alter the language chunks for their own specific needs. These phrases provide the language learners need to perform an activity which is context-reduced and cognitively more demanding.

10 DIFFERENCES BETWEEN SPEAKING AND WRITING FOR CLIL

This section covers the differences between speaking and writing for CLIL. In general, spoken language is less formal and less structured than written language. Spoken language has a more informal vocabulary, sentences that are often incomplete and a lot of repetition. In face-to-face communication, learners receive immediate feedback on their ideas or spoken English, and they can change or adapt their ideas or make themselves better understood on the spot. In writing, there is usually no immediate feedback. As a rule, written texts are more structured, and writers are required to use complete sentences and more academic and subject-specific vocabulary.

In the CLIL classroom, this difference is apparent between a presentation and a report of a scientific investigation. In a presentation, learners might say *we've found out that if you smoke too much…* whereas in an essay, they might write *the investigation established that…* In writing, different mental processes are involved: there is more time to think, reflect and prepare, but also to find synonyms and appropriate language and sentence structures. Learners engaged in writing need different reasoning and higher-level thinking skills to produce meaningful written output. Furthermore, when writing for different subjects in CLIL, learners need subject-specific language as well as information about differences in styles of writing. CLIL teachers should keep in mind that learners writing in a second language need more active support than they would in their first language.

Here are some examples of the various kinds of writing learners do in CLIL (based on Department for Education and Skills, 2004a):

Subject-specific examples	Aim	Audience	Text type
Geography: Write directions as part of a map-reading exercise.	to instruct	tourists	written directions
History: Write about a visit to the Anne Frank Museum.	to recount	parents, friends, teacher	a report
Biology: Write a brochure for heart patients explaining how the heart works.	to explain	heart patients, doctors	a brochure
Art & design: Write a brochure about the National Gallery in London.	to inform	tourists	a brochure
Physical education: Write a flyer on why learners should come to school by bike instead of public transport.	to persuade	learners, teachers	a flyer
Physics: Write a lab report analysing the results of an experiment.	to analyse	teachers, researchers, scientists	a lab report
Mathematics: Reflect on and draw conclusions after conducting surveys of traffic on a roundabout.	to conclude	members of the city council, local police	a survey

Table 4.1 Types of writing in CLIL

APPLICATIONS IN CLIL - TEACHING WRITING

1 METHODOLOGICAL APPROACHES

Writing is a process: in real life, we think, draft, compose, shape and rewrite. It helps if this process is reflected in the teaching of writing. CLIL subject teachers play an important role in encouraging their learners to produce different types of written output. Therefore, it is essential that they demonstrate knowledge and understanding of the writing process. Learners need to be taught how to write an essay for history, a lab report for chemistry, an account of a field trip for geography or an analysis of an experiment for science. This is true for writing in the first language, but it is even more important in CLIL, because of the added difficulty of writing in a second language. In most Dutch schools, the English (and Dutch) departments are solely responsible for writing instructions and implementation of the writing process. To stimulate learners to produce written output, it helps when CLIL subject and language teachers work closely together.

This chapter combines two main schools of thought about teaching writing: the process writing approach and the genre approach. A very brief overview of process writing is given by Seow (2002). The genre approach is summarised by Reppen (2002).

Chapter 3 describes how teachers can help their learners become aware of different aspects of written texts. It also stresses the importance for learners to be able to identify written texts' purpose, structure and organisation. Learners may have good subject knowledge and understanding, but lack the ability to write effectively about a particular subject because they do not understand the reason why they are writing, are unaware of the audience or are not sure what type of language to use for a particular genre. An approach to teaching writing which focuses on these aspects is called a *genre approach*.

The *process approach* sees writing as a process and stresses the need to help learners understand the stages writers go through when they produce a text. These stages are: generating ideas (brainstorming), organising ideas (structuring), and linking ideas (linking sentences and paragraphs). Learners may experience difficulty at any of these stages. If learners are given support at each stage of the writing process, they will be able to write more fluently and creatively.

This table summarises the factors that help learners write more effectively (based on Department for Education and Skills, 2004a).

Conventions	**Learners write more effectively if:**
Purpose	- they understand that their writing has a real purpose; - they know why they are doing it; - they know who the audience is; - they know how the written text will be used; - they know what kind of writing is appropriate.
Text level	- they know how to structure their writing; - they write from the general to the specific and detailed; - they support their arguments with appropriate examples; - they manage to link their paragraphs.
Sentence level	- they know which point-of-view to use (first or third person); - they know which tense to use; - they know when to use active or passive constructions; - they know which sentence structures to use (simple or complex); - they know which connectives to use (such as whereas and although).
Word level	- they know which particular subject-specific terminology to use; - they manage to vary their general vocabulary.

Table 4.2 Factors which help learners write effectively

The next section is a guide for teachers on the different stages of teaching writing. Not every subject teacher will, of course, have the time to cover all these stages each time they teach writing. They may choose to highlight just one, or work in co-operation with the English teacher.

2 DISCUSS TEXT TYPES, AIMS AND AUDIENCE

To write effectively, learners must recognise, understand and work with different text types, such as newspaper articles, poems, laboratory reports and posters. Different texts have different aims; they may be written to persuade, to inform, to describe or to entertain. Learners should know why they are writing: what are the aims of their text? It also helps if learners practise writing for different types of audiences, such as young readers, a jury of a poetry competition, or a pen friend. Different aims and different audiences require different writing styles.

The two examples below (written by learners at the Rijnlands Lyceum, Wassenaar, and provided by Heidi Krieger) clearly illustrate how writing for different aims and audiences affects style.

Text 1

The next day we went to the National Gallery where we had to do our Art assignment. I found this the best museum that I had ever been to. We saw paintings by Michelangelo, Caravaggio and a self portrait by Rembrandt. After the museum we went to Covent Garden for lunch and shopping. We saw great things at the market and in the shops.

Figure 4.6 Written account of a visit to the National Gallery

Text 2

It's a symbolic and anecdotal painting relating to the ancient Roman and Greek mythology. The subject of the painting is the goddess Diana who, as revenge for being disturbed by Actaeon while bathing, changes him into a stag. It's not a clear picture because all creatures are moving fast. The movement makes the painting slightly out of focus. Dark colours and earthy. The paint for the water has a thick surface. The bare breast of Diana is related to Roman & Greek paintings.

Figure 4.7 Description of a painting

These texts clearly have different writing styles. Text 1 discusses events to inform parents or classmates about a trip to London; it could be used as an article in a school magazine. Text 2 describes and analyses a painting in a text for visitors to a museum; it could be used as part of a museum guide. Below is a brief analysis of the texts' aim, audience and text type.

Text 1 An account of a visit to the National Gallery in London	**Text 2** A description of a specific painting in the museum.
Aim: to recount **Audience:** people the learners know (parents, friends) **Language:** The language used resembles BICS, every-day language. **Text type:** a narrative	**Aim:** to explain **Audience:** museum visitors **Language:** The language resembles CALP. It is more abstract and academic, and includes subject-specific terminology. **Text type:** a description in a brochure

Table 4.3 Text features

Writing a variety of text types in English will help CLIL learners acquire a range of writing styles. It is important to acquaint them with the typical conventions of different text types, because this will help them become better, more versatile writers. A useful awareness-raising activity is to show learners several short examples of text types - or writing genres - and ask them to discuss the differences.

3 WORK WITH EXAMPLES

Teachers can show learners different examples or models: good models written by other good learners from the past, models written by themselves, or real models of authentic texts such as newspaper articles, laboratory reports or poems. Find examples of good texts and discuss them with the learners: what makes this text a clear, well-organised and generally well-written text? In this way, learners become familiar with different text types and are able to use them as models for their own writing. Also try showing learners one good and one poor example, and ask them to identify the characteristics of a good piece of writing.

4 LOOK AT TEXT FEATURES (TEXT DECONSTRUCTION)

As well as looking at models of complete texts, teachers can discuss the writing conventions and language features of texts with the learners. In a genre approach to writing, this is called the *deconstruction stage*. Examples of writing conventions include: the use of title and subtitles within a text, the use of examples, topic sentences, the way ideas are used (one idea per paragraph), the introduction and the conclusion. Examples of language features of texts include: the tenses used in a text, the point-of-view (first person or third person), and the connectives used in a text (*but*, *however*, *nevertheless*). Below is an example of a deconstructed essay (reproduced from Counsell 1997), illustrating the writing conventions and language features used in the text.

Writing conventions	Essay	Language features
	Why did the Normans win the Battle of Hastings?	
Title invites causal analysis	The Battle of Hastings **took place** in 1066 when Edward the Confessor died, leaving no heir. Harold Godwinson took his place, but **he had** two rivals, Harald Hadraada, the king of Norway, and William, Duke of Normandy. William eventually won, and this piece of writing explores the reasons why.	← **Third person**
→ Introduction statement of the issue		
Topic sentences lead the reader into the paragraph	**William was a very determined and ambitious leader**. He **claimed** that Harold had promised to help him to become king, and so, when Harold **claimed** the throne, he did all he could to conquer England. He **left** Normandy undefended, and **took** 3000 ships with horses and soldiers across the English channel. He must have been very determined to do this, as the channel was very dangerous. His bravery is shown again during the battle, when he took off his helmet and said to his soldiers, **"Look at me well. I am still alive and, by the grace of God, I shall yet prove victor".**	← **Present/past tense** depending on the focus, e.g. present for views, past for events
Use of quotes to support points	**William also had a strong army, and a good strategy.** For example, he put the archers in the front, then infantry, and behind them the men on horse-back. The Anglo-Saxon Chronicle says, "All the English were on foot. The Normans had foot soldiers, archers and cavalry with horses". This would have been a great advantage.	← **Active voice** more common; passive used when identity of agent is not relevant or need not be repeated, e.g. the castles were strongly fortified
Use of → **supporting comment/ detail**	Also he pretended to retreat, and then the English broke the shield wall, so when the Normans turned back, the English were not very well protected.	
	Therefore William chose a good time to invade, before Harold had established his position as king.	
	Harold's bad luck also helped William to win. Harold Godwinson was fighting Harald Hadraada at Stamford Bridge when William invaded in the south. Harold had to march 300 km, having lost many of his best men in the previous battle. If the wind had not changed just then Harold would have had more men, and he would have had more time to set his army up. There is a picture in the Bayeux Tapestry of Harold being killed with an arrow through his eye. When he died, the English were frightened, and deserted.	← **Connectives** often used for contrast/ comparison in areas of debate, e.g. *whereas, though, while, unless, however, equally, also*
→ **Summary** conclusion	William won the battle for many reasons. It was a mixture of good leadership, planning and luck. If the wind hadn't changed, or if Harald Hadraada hadn't invaded, I think that Harold could have won, and England would be a different place.	Connectives also used to establish cause and effect, e.g. *because, therefore*

Figure 4.8 Example of a deconstructed essay

5 HELP LEARNERS GENERATE IDEAS

Learners need to realise that writing is a process; they seldom sit down and write an essay for history or a lab report for biology without any preparation. Giving learners an essay question to answer or asking them to write a story does not mean that their ideas will spring automatically from their pen. Their mind may well go blank, because learners may initially have no idea what to write about or simply have too many ideas to choose from. Before learners start writing, encourage them to think about what they are going to write. There are several ways to help learners generate ideas; two important ones are *brainstorming* and *freewriting*.

Brainstorming, a technique for activating prior knowledge, is especially good for producing a variety of ideas before starting a writing task. This can be done in class, with the learners generating ideas and the teacher writing them on the board. All ideas should be accepted at this stage. Maybe not all ideas will be used, but make sure they are not lost. Graphic organisers (word webs, Venn diagrams) can also help learners generate ideas. Chapter 1 provides various ways of activating prior knowledge. A variety of graphic organisers can be found online, for example from:
http://www.sdcoe.k12.ca.us/score/actbank/torganiz.htm.

Freewriting is especially helpful when learners have no idea what to write about. Learners are asked to write about the topic non-stop, as quickly as they can, for a certain period of time, without worrying about punctuation, spelling, style or grammar. This technique encourages learners to keep on writing even if they feel they have nothing to say. It allows learners to write things they normally would not, because there is no need to worry about their writing's quality. When they are done, ask the learners to read their text and highlight ideas they could use.

6 WRITE TOGETHER (JOINT CONSTRUCTION)

Even if learners understand the aim and audience of a writing task and are familiar with writing conventions, they sometimes still find it difficult to structure their writing. That is why it can be a useful part of the learning process to do some writing together. Shared writing is teacher-led: teachers and learners write a text together. This is called *joint construction*.

The teacher works with and discusses suggestions from the class, focusing them on the text to be written. The aim is to guide learners in writing an effective text. The teacher and learners say sentences aloud before writing them down, make changes in sentence structure or choice of words, and also discuss and explain why certain words fit the text better than other words. Such demonstrations show learners how and why they make specific choices when writing, which helps them notice many features of writing: appropriate vocabulary, effective paragraph structure, and convincing conclusions. A text already written by a learner is a good starting point. The class can rewrite it together to produce a more polished piece.

7 GUIDE AND SUPPORT FIRST ATTEMPTS

It is useful to develop learners' writing skills by starting with short writing assignments before moving on to longer, more formal texts; in other words, moving from BICS to CALP. When giving feedback on short writing assignments, indicating whether or not the learner is on the right track will hopefully encourage more creative writing and give the learner more confidence.

8 SCAFFOLD THE WRITING PROCESS

In CLIL, production scaffolds can be used to support writing. Provide learners with writing scaffolds or writing frames to create a bridge between the joint construction stage and independent writing. Good CLIL writing scaffolds provide both content and language support.

Below are several examples of writing frames. As learners gradually become more proficient in writing, the amount of scaffolding can be reduced.

25 Writing frame for geography

In this example, a geography teacher supports learners who are writing a paragraph about the differences between urban and rural areas in the Netherlands. The teacher provides ideas (content) about urbanisation in the left-hand column and language support for writing a paragraph (language) in the right-hand column.

Content support	**Language support**
Urban - Amsterdam Rural - Hengelo, Gelderland Differences - population, public transport, demographics, arts facilities, commerce, industry, agriculture	Urban and rural areas in the Netherlands are different in many ways. An example of an urban area in the Netherlands is…… An example of a rural area in the Netherlands is…… Firstly, they are different because…… Another difference is that…… They are also different in that…… Finally, a further difference is that……

26 Writing frame for Art and Design

In this example (Department for Education and Skills, 2002b) an art and design teacher guides and supports learners writing about a painting. The left-hand column provides content support. Learners are encouraged to think about the work of art with guiding questions. The right-hand column provides language support: useful phrases that help learners structure their writing.

Content support	**Language support**
1 Background information Who made this piece of art? What is it called?	The artist who made this piece is… He lives and works in…
2 What can you see? Describe accurately what you see.	In this painting I can see… The painting looks like...
3 Meaning What do you think it is about? Does it have a story?	The painting make me think of… I think the artist means to say that... This painting is dynamic…
4 What do you think of it? What do you like or dislike about it and why? Why did you choose to write about it? What would you like to ask the artist?	I chose to write about this piece because... What I really liked/disliked about this piece was… I would like to ask the artist why s/he...

27 Writing frame for history

This production scaffold (based on Department for Education and Skills, 2002a) shows how a history teacher guides learners in sorting out information about a writing topic and helps them distinguish between main ideas and supporting ideas. After completing the writing frame, learners write an essay about Hitler's reasons for annexing Austria.

What were the different reasons for Germany annexing Austria? Complete each box.

Personal reasons	Political reasons
Economic reasons	Cultural reasons

Hitler annexed Austria for a number of reasons. Write your reasons out in sentences.
Firstly, there were personal reasons. These were...
Next, there were political reasons. These were…
Then there were economic reasons. These were...
Lastly, there were cultural reasons. These were...
The most important of these reasons is…
I think this because…

28 Writing frame for English

This production scaffold about the Salem Witches helps learners structure and write an essay after reading Arthur Miller's play *The Crucible*. Initially, learners receive a great deal of guidance, with suggestions about both content and language. Later in the writing frame, the learners are required to gradually provide more ideas of their own.

The Salem witches

Your assignment is to write an essay that shows:

1 that you have knowledge of and understood *The Salem Witchcraft Trials of 1692*, and

2 that you can follow directions on how to write an essay.

After writing your essay, let a classmate review it, then make the final corrections before retyping and submitting it.

Introduction

First paragraph

For your introduction, copy exactly what follows:

After studying *The Salem Witchcraft Trials of 1692*, I have come to the conclusion that the three people most to blame for the witch hysteria and the subsequent death of innocent people are _____ , _____, and _____. Each of these people, in some way, caused harm to blameless people, and I will, in this essay, explain what these people, knowingly or unknowingly, did to contribute to the death of the innocent people hanged as witches in Salem Village in 1692.

Body

Second paragraph

_____ was most responsible for the Salem Witch hysteria.

FIRST REASON:_____.

In addition, he/she SECOND REASON: _____.

Third paragraph

_____was also responsible for the tragedy.

FIRST REASON: _____. Another reason he/she is to blame is because (SECOND REASON)_____

Fourth Paragraph

Lastly,_____ is responsible for the hanging of innocent people as witches. FIRST REASON_____.

Also, SECOND REASON _____

Conclusion

Last paragraph

In conclusion, there are three people who are most to blame for the hanging of innocent people during the Salem Witchcraft Trials of 1692. These three people were _____, _____,and _____. Each of these three knowingly or unknowingly caused the witch hysteria to grow and contributed to the deaths by hanging of the men and women during the Salem Witch Trials of 1692.

29 Writing frame: connectives

This writing scaffold (Department for Education and Skills, 2004a) provides only general language support. To help learners write more coherent essays and combine ideas in coherent sentences, lab reports or analyses, try providing a similar list of useful connectives.

Adding	**Cause and effect**	**Sequencing**	**Qualifying**
and	because	next	however
too	so	then	although
as well as	therefore	first, second	except
moreover	consequently	meanwhile	as long as
Emphasising	**Illustrating**	**Comparing**	**Contrasting**
above all	for example	equally	whereas
in particular	such as	in the same way	instead of
significantly	for instance	similarly	alternatively
notably	in the case of	likewise	otherwise

9 ENCOURAGE LEARNERS TO WRITE INDEPENDENTLY

Learners gradually become more proficient, and eventually more independent, writers as they progress through the years. To become independent writers, learners need ample opportunities to practice. The teacher's role at this stage has changed to that of consultant, reviewer and final assessor. Chapter 5 presents more information about assessing writing.

30 Essay-writing checklist

Outline

An outline is a brief description of what each paragraph is all about. It is often easier to work from the core:

- quick description of introduction;
- first major point;
- second major point;
- quick description of conclusion.

Lay-out

- The title should be written in bold print and centred.
- Your font size should always be 12.
- 1.5 spacing should be used so that the teacher has space for comments.
- Leave a single space between paragraphs.
- Use a left margin only.

Sentence structure

Have you checked the word order of each sentence? The best way to do this is to read your essay aloud, and to think about each sentence one at a time. In an essay all sentences are written in full; there are no exceptions.

Vocabulary

This is not creative writing. Avoid slang, brackets, abbreviations and the word *etc*. Swear words are absolutely inappropriate and you should never make personal statements or requests about your work. In other words, do not say: *I thought I learned a lot from writing this essay*. However, the essay should contain the words you have learned in class that go with the subject you are writing about.

Grammar

Check that your tenses are consistent, necessary prepositions are included, and linking sentences are used to link one paragraph to the next. Again, many errors can be discovered by reading your essay aloud.

Spelling

If you use a computer for your final copy, spelling mistakes are unacceptable, as you can use a spellchecker. If you write your essay by hand, you should have someone proofread your essay. This method also helps you to find mistakes in grammar and sentence structure.

Paragraphing

- Make sure each paragraph contains one main idea only, but one complete idea. In English there are no sub-paragraphs.
- Make sure your paragraphs follow a logical order. Linking sentences help your ideas to flow smoothly from one paragraph to the next.

10 ENCOURAGE PEER REVIEWING

Self or peer reviews transfer control of the writing process to the learner. Encouraging learners to give feedback on their own and others' work can also help them become more independent writers. For example, divide the class into reading groups, which read and select the best written product. Groups discuss why a piece of writing is good. In a short plenary session, the groups then present and illustrate

their conclusions. The best examples can be displayed in the classroom: this helps learners become proud of their writing.

11 GIVE FEEDBACK DURING THE WRITING PROCESS

Useful feedback can be given during all stages of the writing process, not just on the final product. Detailed comments on final products are often wasted because they are perceived as justification for a grade rather than as a form of support. Comments on work-in-progress encourage learners to improve the final product. Feedback and error analysis in writing will also be dealt with in Chapter 5.

CONCLUSION

This chapter shows the importance of encouraging learners to produce many different kinds of written and spoken output. This promotes both language and content learning. Teachers do this by setting up speaking tasks that not only enable learners to interact with each other in the target language, but which also require them to adjust their language so that other learners can understand them. Teachers can also set up writing tasks which help learners become aware of different text types and which require them to write for a variety of audiences and aims.

To sum up, to help learners produce formal and informal spoken and written output, teachers can:

- provide learners with plenty of speaking and writing opportunities to try out newly-learned language forms or subject-specific terminology;
- create a safe environment of small speaking groups for learners to use the target language;
- set speaking and writing tasks where learners can use lots of visuals and day-to-day language (in the first year of CLIL);
- provide learners with tasks that require deep thinking and where external clues are omitted gradually (in the later years of CLIL);
- use information gap activities;
- stimulate learners to produce more complex output by asking fat rather than skinny questions;
- stimulate learners to generate their own questions;
- make clear that English is the language of instruction and communication;
- praise learners when they do use the target language;
- support learners by providing speaking frames and production scaffolds;
- set writing tasks with a variety of text types;
- set writing tasks with a variety of audiences;
- demonstrate and go through the different stages of the writing process;
- support learners with writing frames and production scaffolds;
- encourage peer review.

13 Teacher development: encouraging speaking and writing

1 Observe a colleague teaching, and write down all the questions he or she asks for about 10-15 minutes. You can also make an audio recording of yourself or ask a colleague to observe one of your classes. Then analyse the questions you or your colleague asked in the following grid.

Questions asked	Fat question	Skinny question	Learner output

2 Read the description about information gap activities in this chapter and design your own information gap activity related to the material you are working with at the moment.

3 Prepare a writing assignment that has a specific purpose or aim, a particular audience and a particular text type.

4 Design a speaking or writing scaffold which you can use in your classroom.

38 HOT AIR BALLOON DEBATE

Have a 'balloon debate' to decide who deserves to be saved from a sticky situation.

Learners imagine they are in a hot air balloon which is losing helium and height and will soon crash because it is too heavy. Each passenger has an opportunity to make a speech outlining the reasons why s/he should be allowed to remain in the balloon. The audience decides which of the speakers has presented their case most persuasively.

Divide the class into a number of teams, each representing one passenger in the rapidly descending balloon. In these groups, the learners prepare to present their case about why they should stay in the hot air balloon. They can write short notes to help them remember what to say, but the speech should sound as spontaneous as possible. This preparation stage can also be given as homework.

Once the preparation has been completed, to ensure that everyone in the group contributes, randomly appoint the first contestants to give the speech from each group. You may want to provide learners with a scaffold or some questions to help them to prepare their speeches.

You could also give learners guidelines for structuring the presentation of their arguments, such as:

- a maximum of three minutes;
- begin with an opening statement;
- illustrate with examples;
- prepare at least three convincing arguments;
- end with a challenging closing statement.

You can also provide helpful words and phrases for giving opinions in a formal speech.

After each group's first speech, the class votes for the two most convincing characters. Learners are not allowed to vote for their own group! The two remaining survivors give a new speech, summing up the crucial reasons, and trying to add new ones, for their continued survival. Finally the class votes for the last remaining survivor.

This link lists websites on debate rules:
www.educationworld.com/a_lesson/lesson/lesson304b.shtml.

This link gives examples of balloon debates:
www.kent.ac.uk/careers/interviews/balloonDebate.htm

History: The Russian Revolution
Carry out the hot balloon debate with five historical figures related to the Russian Revolution: Tsar Nicolas II, Karl Marx, Lenin, Trotsky and Stalin.

Variation: Chain debate

Preparation
The teacher makes two smaller groups, Group 1 and Group 2. The teacher writes down a controversial statement. Group 1 must agree with the statement and Group 2 disagree. The rest of the class are members of the jury who will decide which learner has used the most convincing arguments and thus wins the chain debate.

The two groups first prepare a number of arguments for (Group 1) or against (Group 2) the statement. They will need the same number of arguments as there are people in their group: every learner argues a single point during the debate.

The debate
1 One learner has the role of time keeper and ensures that speakers only speak for one minute.
2 Speakers from each group take turns. Speaker A from Group 1 starts off the chain debate and gives one argument only. S/he may only speak for a maximum of one minute.
3 Speaker A from Group 2 now responds to the first argument and adds one argument from Group 2.
Speaker B from Group 1 then responds to this and adds a second argument from Group 1.
4 The groups keep on contributing arguments until everyone has spoken.
5 The class votes for the winning debater.

39 THE CONTROVERSIAL QUESTION

Agree or disagree with a controversial statement.

Learners think individually about a controversial question. First, they spend a couple of minutes thinking for themselves and writing down their views. Then the teacher allocates buzz groups that are given five minutes to discuss their view on the question and to come up with an answer and an explanation. After five minutes the teacher asks one learner per group to give an answer.

History: Solving global problems. 'Is the UN an outdated organisation?'
Physical education: Doping is difficult to trace. Should athletes therefore be allowed to use doping?

40 ROLE-PLAY

Learners change input into a role-play.

Learners create a role-play after, for example, watching a DVD clip, reading a text, or doing a task.

History: Elizabeth I of England
Show the film *Elizabeth*. As they watch, half of the learners prepare to be Queen Elizabeth I.
The other half is given one of these names and prepares to play him or her:

- Duke of Norfolk
- Robert Dudley, Earl of Leicester
- Mary of Guise
- Sir Francis Walsingham
- William Cecil

The question for Elizabeth is: Who can you trust?
To find out the answer to this question, the learners walk around the classroom. The "Elizabeths" ask as many people as possible questions to find as many allies as possible.

In the follow-up plenary, the class has a new task: the learners who were Elizabeth place the other characters into two groups: allies or enemies. Then the Elizabeths explain their reasons and choices.

Biology: menstruation game
Give the learners the task to act out the menstruation cycle. Each learner plays a different part of the body and explains their role. This is a creative way of recycling information.

41 TABOO GUESSING GAME

Describe a key word so that other learners guess what it is.

Divide the class into teams of three or four. Two groups compete against each other. Each has a clue giver and a checker. Team A's clue-giver turns over the first card and holds it in his hand so only he and the checker from Team B can read it. The clue-giver describes the mystery word at the very top of the card without using any of the taboo words printed below it. No rhyming words, hand motions or sound effects may be used. If the clue-giver from Team A says one of the taboo words, the checker from Team B will say 'taboo' and a new card is turned over. The group must guess the word within 75 seconds.

Scoring
Each time a team guesses a word correctly within 75 seconds, their team scores a point and a new card is turned over. If the clue-giver says one of the taboo words or runs out of time, the team loses a point.

Biology: Species

Mystery word	den	predator	mammals	habitat
Taboo words	bear	prey	fur	food
	home	kill	hair	environment
	nest	eat	milk	home
	fox	hunt	animals	shelter
	shelter	animal	humans	water

42 ELEVATOR PITCH

Sell an idea in two minutes.

An elevator pitch is a concise, carefully planned, and well-practised description that anyone should be able to understand in the time it would take to ride up an elevator. An elevator pitch could be held in almost any subject.

Learners prepare a short persuasive talk of no more than two minutes about a subject-specific topic, object or process. In this talk, they describe the specific features of the topic and convince their fellow classmates of the benefits or advantages of their choice. Their talk is a kind of commercial, and learners need to make sure their fellow learners will vote for their 'elevating idea'.

Art and design: the best painting
Learners choose a piece of art and present an elevator pitch to convince their fellow classmates that the painting they have chosen is the best of its kind. Other learners vote for the best performance and give reasons why they have selected one particular elevator pitch as best.

Variation
Alternatively, to encourage learners to read articles about art on a more regular basis, organise short presentations at the beginning of each class. Ask different learners at the end of each class to find an interesting article on art and to summarise it for the other learners during the next class, including an explanation of why they chose the article. This can lead to interesting discussions about art.

43 GOVERNMENT ECONOMIES

Debate about the abolition of an object, organisation or system.

Provide information related to the possibility of abolishing something, for example an organisation, an object, a religion, or even a chemical. Learners now form small groups to discuss arguments for and against abolishing their object or organisation. The outcome of these talks will be discussed in a plenary session.

Biology: Human organs
The government has announced plans to economise on the costs of human bodies. The most striking measure is the plan to abolish at least one entire organ system. However, there is still no consensus among government officials which organ system should be done away with. According to reliable sources, more details will be announced next month.

The different organisations for organ systems have been asked for input and comment. The following seven institutes were approached:

- the Association of Circulatory Systems (ACS);
- the Royal Club of Respiratory Systems (RCRS);
- the Friends of Excretions (FE);
- the Digestive Society (DS);
- the Endocrine System Interest Group (ESIG);
- the Nervous Ones (NO);
- the Propagators of Reproduction (PR).

The above-mentioned interest groups have expressed their concern about the situation, but are not willing to comment at this stage. All agree that talks should be held with each party concerned before opinions can be expressed, and that society should not be rushed into taking such far-reaching measures.

The following procedure has been proposed. Each of the organisations will send representatives to argue their case to keep their particular organ system. The talks which will be held at school. There will be simultaneous meetings, each with one representative of each interest group. The outcomes will be discussed in a plenary session. Hopefully, a government official will be present to witness the possible consequences of their proposed policies.

44 INFORMATION GAP

Ask questions to find the missing information.

Give learners different texts about the same topic which contain different information and some gaps where information is missing. Using their texts, learners prepare questions for each other, aiming to find out the missing information. Then, learners ask and answer each other's questions.

History: Egyptian scripts and the Rosetta Stone
Source: www.ancientegypt.co.uk/writing/rosetta.html.

Show learners Egyptian hieroglyphs. Learners first discuss in pairs what they know about ancient Egyptian scripts. If they do not know anything about the topic, ask them to write down their questions.
Divide the class into two groups, A and B. Explain that they will receive two texts about the Rosetta Stone, but that some information is missing. In pairs they will ask each other questions to try and complete the text. Give them time to read the text and prepare questions to complete their own gaps. When they have written their questions, tell them to take turns to ask questions and write the answers in the appropriate gap on their worksheet.

Group A - What is the Rosetta Stone?

The Rosetta Stone is a stone with writing on it in two languages (_1+ 2_____), using three scripts (Hieroglyphics, Demotic and Greek). The Rosetta Stone is written in three scripts because when it was written, there were three scripts being used in Egypt. The first was Hieroglyphics, which was the script used for _ 3 _____ documents. The second was Demotic, which was the _4_____ of Egypt. The third was Greek, which was the _ 5 _____ at that time. The Rosetta Stone was written in all three scripts so that the priests, government officials and rulers of Egypt could read what it said. The Rosetta Stone was carved in _6 _____ The Rosetta Stone was found in a small village in the Delta called _ 7_____ in 1799 by French soldiers who were rebuilding a fort in Egypt. It is called the Rosetta Stone because it was discovered in a town called _ 8 _____

Group B - What is the Rosetta Stone?

The Rosetta Stone is a stone with writing on it in two languages (Egyptian and Greek), using three scripts (_1+ 2+ 3 _____). The Rosetta Stone is written in three scripts because when it was written, there were three scripts being used in Egypt. The first was _4_____, which was the script used for important or religious documents. The second was _ 5 _____ , which was the common script of Egypt. The third was _ 6 _____, which was the language of the rulers of Egypt at that time. The Rosetta Stone was written in all three scripts so that the priests, government officials and rulers of Egypt could read what it said. The Rosetta Stone was carved in 196 B.C. The Rosetta Stone was found in a small village in the Delta called Rosetta in _ 7___by_ 8 ___ who were rebuilding a fort in Egypt. It is called the Rosetta Stone because it was discovered in a town called Rosetta.

Variation
To check that learners have understood the texts, you can design a task for them based on the information from the two texts. This task should be impossible to complete without the missing information that the other learner has.

Geography: Jigsaw puzzle
Jigsaw tasks are tasks where several learners are given parts of the information needed to complete a task. They need to ask each other questions to complete the 'puzzle'. In pairs, learners each receive a partially completed chart giving different information about three countries. Without looking at each other's chart, both learners request and supply missing information to complete their charts.

45 TALKING ABOUT TALKING

Help learners understand and discuss what useful 'exploratory talk' is when doing group work.

Have a short plenary discussion about working in groups and what kind of questioning or feedback helps the group to work together. Introduce the term 'exploratory talk': people work critically but constructively with each other's ideas.

Write some of the points the learners make on the board. Next, give each learner a copy of the *Exploratory talk handout* below. Each learner completes the handout individually. Once everyone has finished, hold a small group or class discussion on the results. At the end of the activity, come up with some key points which are important to keep in mind when doing group work.

This activity can be used in all subjects.

Exploratory talk

Below are some suggestions which might help or hinder your group to work with and talk to each other. Read the suggestion in the left-hand column. Tick the 'helpful' or 'unhelpful' column first, then note down what particular effects you believe the contribution might have in the right-hand column.

Contributions	**Helpful**	**Unhelpful**	**Effects**
Bringing new ideas into the group			
Saying, "Yes, but..."			
Summarising an idea that a group member has just suggested			
Arguing about an idea			
Asking questions			
Suggesting another idea related to one just mentioned			
Giving your own point of view			
Write your own helpful idea here (in the -ing form):			
Write your own *less* helpful idea here (in the -ing form):			

46 I AM A ...

Write about a process in the first person.

Ask learners to write a story in the first person about a process in your subject. They explain what happens in the various stages of this particular system. The learners imagine they are part of an enormous system and that they are going on a journey through that system. Whether they survive or not, a report must be written in which learners describe what happens at every stage of their journey: which of their friends they encounter or lose at each stage. Create a handout for them like the one below. Make sure your learners know what to include in the story and how to structure it: where does it takes place, what challenges must the character face and overcome, how does the character reach their final destination (or not!). They should tell their journey as a narrative, starting at the beginning of the process and finishing at the end.

Biology: Digestive system
Imagine you are part of an enormous cheeseburger. Perhaps you are the bread roll, or the melted cheese, the pickles, the onions, the secret sauce, the lettuce or possibly even the beef. Whatever part you choose to be, you are the leader. It is your mission to lead the burger on a dangerous journey. A journey to the bottom of the world. A journey through the digestive system.
It is a journey involving many risks and not all of you will survive. All of you will come under attack and most of you will be destroyed along the way. Many of you will suffer a painful death and be broken down into many thousands of pieces, to be absorbed into the blood of a voracious monster otherwise known as *Homo sapiens!*

Whether you survive or not, a report must be written for base headquarters. In the report you must describe what happens at every stage of your journey. Say which of your friends (food types/ nutrients) is destroyed at each stage and who is responsible (yes, watch out for the vicious enzymes and evil acid!). Tell it as a story, starting in the mouth and ending in the anus. At the end, only one of your friends is left over… let this 'person' take over the story after you have been destroyed.

Variations
Geography: The journey of lava in an exploding volcano.
Biology: The journey of a migratory bird or animal.
Physics: The journey of a carbon atom.
History: The journey of a soldier's tiffin tin (lunch box) in the trenches.

47 THE STORY OF...

Write about a process in the third person.

Ask learners to write and illustrate a 300-word children's story in the third person about an object, describing what happens to the object when it is being transported from one place to another. In their story, learners describe: specific details of the object; its origin; and in detail, its journey from departure to arrival. Their account should read as a children's story, beginning with an introduction (who or what is this object), a middle (the actual journey with all sorts of events, unexpected hazards) and an ending (end of the journey, where the object is now and what has happened to its shape). Provide some scaffolding to help them to plan and write their story.

Geography: Erosion and river processes

1 Plan your story by answering these questions.

- Decide on a name for your pebble. Think about what sort of pebble you are going to write about. How big is it? What shape is it? What type of rock is it made of?
- Your pebble has been weathered from the side of a mountain. What mountain range does it come from? What sort of weathering has made your pebble? How does this type of weathering work? How did your pebble get into the river? What river is your pebble in?
- Your pebble is being transported along the whole length of the river. How does the river change as the pebble moves along? Does the river change name? How does the pebble change as it moves along the river? What sorts of things happen to the pebble as it moves along?
- Your pebble is eventually transported to a resting place. Where is it at the end of the story; a delta, the sea? What does your pebble look like now? What is the name of the place where your pebble is?

2 Now plan the plot of your story. Include as many of the new geographical words as you can in your story. Keep your textbook open when you plan and write the story. Make sure you tell the children what these difficult words mean. Plan what sketches, drawings or pictures you would like to use to illustrate your story.

3 Write a rough draft of your story in your notebook and edit it. If you work on the computer, always print out your work and bring it to class. If you do not do so, you will be wasting your class time.

4 Hand in a final copy including the sketches, drawings or pictures.

Variations

Technology: The journey of raw materials across the globe; for example, from cotton plants to jeans, or from coffee plantation to a coffee bar in New York.
History: The journey of a captured flag during war time.
Biology: The journey of a hormone, a red blood cell or an egg cell.

48 DICTOGLOSS

Dictogloss: reproduce a short text you have listened to.

Learners listen to an audio text about a topic. They eventually need to reconstruct the text in as much detail as possible. In doing so, learners practise listening, writing and speaking, and use vocabulary and grammar to complete the task. The learners listen to your chosen text, read along at normal speed, and write down key words. Then, in groups of three or four, they work closely together to share, compare and discuss their individual notes and co-operate to reconstruct the text in as much detail as they can.

History: The Aztecs

1 Using a course book or the Internet, find a short text on the Aztecs of no more than ten sentences.
    1 In 1519, Hernan Cortez set foot upon that part of Central America that is today known as Mexico.
    2 He expected to find gold, and he did.
    3 What he did not expect to find, however, was the great Aztec civilisation.
    4 The Aztecs were in many ways more advanced than the Europeans, but nonetheless they were conquered by Cortez and his men.
    5 Originating in the plains of Aztlan in north-western Mexico, according to their own legends, the Aztecs slowly migrated southward.

2 Dictation: Read the text at a speed a little bit slower than native speaker speed. Read the text again at native speaker speed; learners individually make very brief notes about the main ideas. The purpose is to get the main ideas, not every word exactly as it appears in the text, so do not read too slowly.
3 Reconstruction: The learners work in pairs and then fours to compare notes and write a shared version of the text, editing for accurate punctuation, spelling and inclusion of the main ideas.
4 Analysis and correction: The learners compare reconstructions with other groups and with the original. Discuss the differences.

49 THREE-PICTURE STORY

Develop a sketch and describe a process in the third person.

Provide learners with a series of basic sketches that represent a process you have covered in your recent lessons but in which certain steps have been left out. Learners add information (colour and details) to each sketch to show the steps in the process. They also write a descriptive text for each drawing.

Geography: The development of tourism in the Alps
The learners are given three pictures of an Alpine valley on A3 paper, entitled:

1 The traditional Alpine environment and lifestyle,
2 Tourism moves in
3 Sustainable tourism.

Through various forms of input, such as video, images, texts, and worksheets, the learners are given background information on the traditional Alpine environment and lifestyle. When they have a significant amount of information, they are told to choose six geographical themes and to write six information boxes (one for each theme) about the first picture. For example

1 housing
2 jobs
3 number of inhabitants
4 source of income
5 farming habits
6 infrastructure

The learners develop the picture and add more details. This is repeated for the other two pictures. However, the learners are given fewer details per picture, so that they have to use their imagination a bit more to be able to fill in the six information boxes. In the second and third pictures, they must also illustrate the various themes they have chosen to develop (e.g., draw roads or an apartment building).

Variations
History: Working conditions for farmers or industrial workers in Europe.
Physical education: Different stages of the high jump.

50 WHAT HAS JUST HAPPENED?

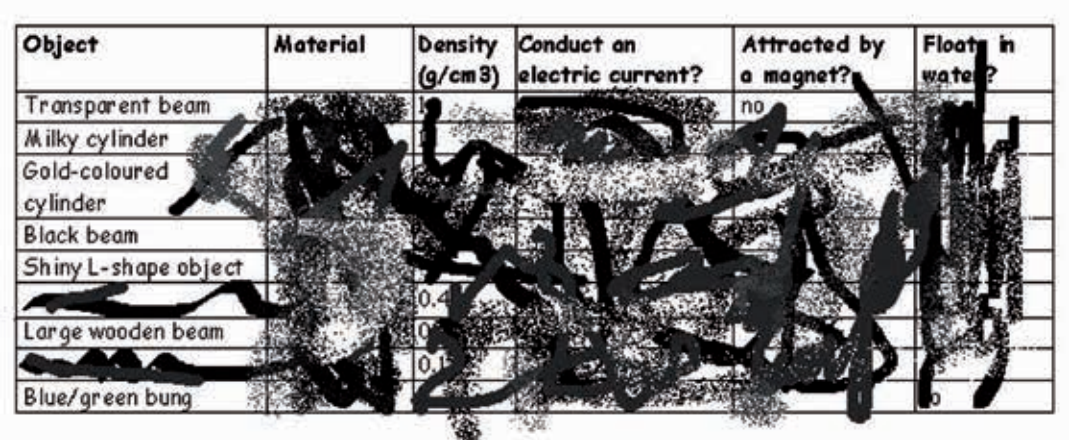
Reconstruct a table with missing information.

Ask learners to reconstruct something that is damaged or broken, by doing an experiment.
Then, ask them to write a report on how they carried out this investigation. In the report, learners describe their research method and give reasons for choosing this method. They write in the style of a police report, explaining in detail the various stages of the investigation, giving a detailed analysis of the research, and drawing a well-argued conclusion.

Science: Density measurements

Learner handout

In the box at the front of the classroom you will find a set of nine different objects used for various scientific experiments. Originally, the box came with a small card which described the composition of the objects. However, someone has damaged the card, and now it can't be read any more.



Object	Material	Density (g/cm3)	Conduct an electric current?	Attracted by a magnet?	Floats in water?
Transparent beam				no	
Milky cylinder					
Gold-coloured cylinder					
Black beam					
Shiny L-shape object					
		0.4			
Large wooden beam		0			
		0.1			
Blue/green bung					

The aim of this exercise is to identify the materials from which the objects have been made and to make a new table to replace the damaged one. To perform the investigation you will need to make density measurements of the objects. Density measurements can be obtained by measuring an object's volume and mass. You will have to make some choices, such as what equipment to use and what formulae you might need. Choose wisely – your decisions will affect how accurate you can be and how precisely you can identify the materials! Different objects may require different solutions, so don't be afraid to make new choices each time.

Carry out appropriate measurements to find density and record the results in a new table. Describe your methods in your notebook. Perform more measurements to check for floating, magnetism and electric current. Fill in the table. The data you collected will not be enough to identify the composition of the objects. For this, you will have to compare your values with those from a reliable source. Data from such a source will be displayed in the classroom. How do your values compare with the benchmark? How sure can you be about your identifications?

With your partner, write a report. In it, describe how you carried out the investigation and try give valid reasons for choosing your methods. Include a completed results table identifying the objects. You can work together, but you must hand in one report each. Give yourselves a score (out of 10) indicating how confident you are of the identifications. Explain why you give yourself the score you do!

51 LEARNER-GENERATED QUESTIONS

Create your own difficult questions and talk about questions.

Stage 1

You will need a classroom cleared of chairs or a gym or hall. Give the learners one coloured card each. Use a page from your course book which is challenging for your class; there should be quite a bit of information on the page. Remind learners of English question words such as *what, when, why, how, where,* and *how many*. Tell the class you are going to practise asking difficult questions.
Each learner thinks of a difficult question about the course book page and writes it down on his/her card. Then everybody stands up and circulates, asking and answering the questions. When the learners have run out of energy, ask them to sit down again for the discussion which follows.

Stage 2

Carry out a class discussion about content and language, asking questions like:

- What makes a good question?
- Which question do you think was the best? Why?
- Which questions are more interesting? Why?
- Which questions were easy to answer? Why?
- Which questions were more difficult to answer? Why?
- Which questions were more difficult to formulate in English and why?
- Which question was written in the best English?

You can also give feedback on the language of questions.

History: The Holy Roman Empire

What influence did Islam have on the Renaissance?	Why was Christopher Columbus' journey to America in some ways a disaster?
Which country was the greatest power in the Renaissance?	What was the role of the Pope during the Renaissance?

Variations

Collect all the questions and use a number of them in a test on the material.

52 A DAY IN THE LIFE OF...

Write the story of an event from the point of view of a person who experienced it.

Learners write a story (with a minimum of one page) in the first person about a special event or day in the life of a particular person from your subject. They describe specific details about this person, and what a day in the life of this person could look like.

History: Ancient Greece
Imagine you are living in Athens. Who are you? A woman, a male citizen or a slave? You are going to write about a day in your life. Perhaps there is a special event you are going to attend. Or you could write an autobiography: write about your childhood, your parents or what you are doing right now in Athens. When choosing your character, please answer the following questions:
If you are a female citizen: Are you married or not? Do you live in a wealthy or poor household? How does your family earn its money? How do you spend your time each day?
If you are a male citizen: Are you married or not? Are you wealthy or poor? What goes on at the debates in the assembly? Have you served in the army?
If you are a slave: Are you male or female? Are you young or old? Who owns you: a family or the state? Where were you born: in Athens or somewhere else in Greece, or in a different country? How did you come to be a slave? What job do you do?

Your story should be a minimum of one page (A4; typed). It will be assessed on the use of English, the historical content, layout and originality.

Variations
Geography: Imagine you are an Indian living in the Brazilian rainforests.
Biology: Imagine you are a human organ.
Physical education: Imagine you are a famous footballer/hockey player.

53 CLASS MAGAZINE

Write a magazine about subject-specific issues.

Learners compile a complete magazine for their peers about a topic you are covering. It is a class assignment, and each group will be awarded a mark for their contribution. Good organisation is an important part of the assignment, and this will also be taken into account.

Biology: Class magazine on drugs and alcohol

Ask learners to make groups of three. One of these groups will comprise the editing team and co-ordinate the gathering of articles and lay-out of the magazine. The editors don't have to write any articles about drugs and alcohol, but they have a number of other responsibilities.

What does the editing team have to do?

- Keep track of what each group is doing and what topics they have chosen so that no subject appears twice. Make sure that the most important drugs are not left out!
- Collect all articles digitally. Agree on deadlines!
- Send articles back for improvement, if necessary.
- Design a front page.
- Determine the order of the articles.
- Add a table of contents and page numbers.
- Write a short introductory text for the first page of the magazine.
- Keep in contact with the teacher!

What do the other groups have to do?

- Choose a topic (e.g. marihuana) and check with the editing team that no-one else has chosen it.
- Look up information about your topic. You can use the Internet, books, and brochures from your biology teacher.
- Divide the tasks within your group.
- Write *at least* three different kinds of contributions to the magazine. These contributions or articles can contain information about the use and dangers of a drug, but there are other forms, such as:
    - an interview with an addict, a former addict, or a social worker;
    - a fact file: Did you know…;
    - a comparison between drugs: types and effects;
    - a cartoon;
    - a problem page;
    - a comparison of drug use and drug-related problems in different countries;
- Provide illustrations to go with the articles.
- Each article *must* mention the name or names of the authors.
- Each article *must* be original text and not copied from the Internet or other sources.

54 ENCYCLOPAEDIA ENTRY

Write an entry for a children's encyclopaedia.

Ask learners to design an entry for a children's encyclopaedia about different aspects of a topic you are covering. First, look at Wikipedia or another encyclopaedia for models. Discuss the difference between a children's and an adult's encyclopaedia.

Geography: Population density

Learners write an encyclopaedia entry about a country's population density. Provide some pointers to help them prepare. For example:

- Which factors have caused this situation?
- Describe the relevant factors which account for the size of the population in your chosen country.
- Mention the physical and the human factors related to population density that we have discussed in class and which are covered in the geography book.
- Use whole sentences.

Give a short overview of your country and label the factors (reasons) that influence the population density. Include a fact file about your country.

The end product is an encyclopaedia entry consisting of:

- a **fact file** containing facts about the country's land, people and trade.
- a **map** of a country with labels indicating the factors that influence population density
- a three-to-four-paragraph **text** describing and explaining a country's population density.

Possible source: news.bbc.co.uk/2/hi/africa/country_profiles/3466917.stm.

Practical lesson idea to encourage non-linguistic output

55 DESIGN A MODEL TO BE TESTED IN CLASS

Non-linguistic process.

Ask learners to make a subject-specific topic design and model, which will also be tested.

Technology: Design a model

In this exercise, learners are civil engineers. They design and make a scale model of a new bridge. The scale model should meet the following requirements:

- The model should bridge a gap of 530 mm;
- It should weigh no more than 70 grams;
- The bridge should not have any supporting pillars that might obstruct passing ships;
- The lowest point of the bridge is 100 mm below the riverbanks;
- The materials you are allowed to use are no longer than 500 mm;
- The strength of the bridge will be tested in class.

Science: Energy

Design a "mousetrap car" that drives as far as possible.

Make a work plan with

- a description of how the mousetrap car works;
- a list of materials needed.

Your scale model should meet the following requirements:

- The route of the mousetrap car is a straight line;
- The floor is hard and level;
- The energy is carried across on a horizontal plane;
- The mousetrap is the only energy source for the power of the vehicle;
- The mousetrap is fixed on to the car;
- The mousetrap may not be changed.

Design process:

- Think of a way to deal with the problem and set up a list of demands;
- Describe the sub-functions and come up with solutions for each sub-problem;
- Formulate a design proposal;
- Make and test the design.
- Demonstrate the design.

Instruction:

- Write a brief instruction manual which matches the design.

Demonstration:

- You will demonstrate the car, the final product, to your fellow learners, the technical assistant and your teacher in a race.

Variations

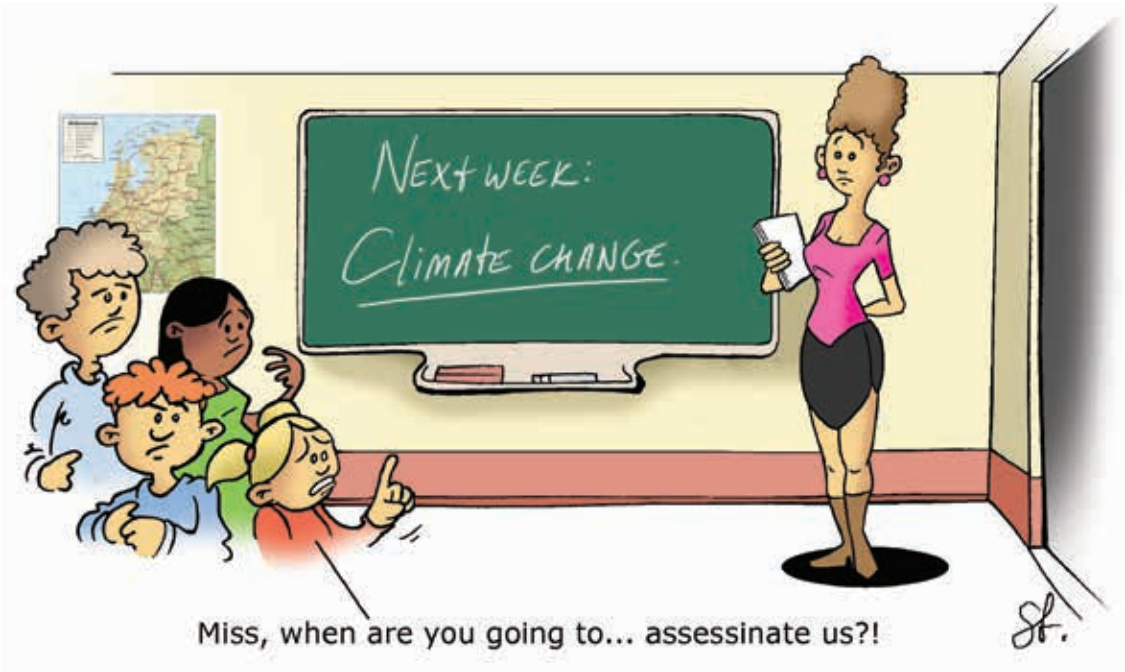
Science: Make an electric circuit.

Chemistry: Make a model of a molecule.

Biology: Build a part of a human skeleton and name the major bones.


5

5 Assessing learning and giving feedback for CLIL



This chapter covers:

- background information on *assessment* relevant to CLIL;
- types of feedback on learners' spoken and written English which support CLIL;
- practical examples for feedback and assessment in CLIL.

INTRODUCTION

Assessment and feedback are central to all learning. The way CLIL teachers assess their learners and give them feedback on their achievements influences how learners learn, both during lessons and during study outside the classroom, for example when doing homework or preparing for tests. CLIL teachers can use assessment and feedback to encourage learners to work on developing their understanding of the subject content. Feedback and assessments are also helpful tools for making learners pay attention to appropriate and accurate language use.

In this chapter, we define assessment quite broadly as the gathering of information about learners' progress. This information can be helpful to teachers, learners and parents and will be most complete if teachers use a range of assessment techniques and assess both content and language. *Rubrics*, *peer assessment* and self assessment can all motivate learners to take an active role in producing work of the expected standard, and make clearer what those expectations are. There are many points in the learning process at which learners can be assessed, for example when they are working on assignments or after completion of their tasks. There are also different ways of assessing learners; there is a distinction between *assessment of learning* and *assessment for learning*.

Feedback also plays an important part in learning. CLIL subject teachers are experienced in giving feedback on their learners' *performance* relating to key subject concepts. They have had less practice and experience in giving feedback on language use. Second language learners make language mistakes for a variety of

reasons and this affects how CLIL teachers deal with them. In the cartoon above, the learners confuse the words *assassinate* and *assess*. One reason for this may be that they do not hear the difference between the *a* in *assassinate* and the *e* in *assess*. A teacher could explain the differences between the words' meanings, but also the difference between the *a* and *e* sounds in English. This chapter shows teachers how to give feedback on content as well as language and introduces effective ways of dealing with language mistakes. It demonstrates how teachers can integrate this feedback too.

14 Your own ideas about assessment and feedback

Look at the following statements about assessment and feedback. Mark the lines with a cross to show to what extent you agree or disagree with each statement.

1 I don't know enough about English to give learners feedback on their language mistakes, so I shouldn't even try.

Strongly agree _____ Strongly disagree

2 Teachers of English already have enough marking to do. They don't have time to mark everything learners write for the other subjects as well!

Strongly agree _____ Strongly disagree

3 Paper and pencil tests are much easier and quicker to mark than portfolios.

Strongly agree _____ Strongly disagree

4 I just want to give every learner a grade for my subject and that's it. I am not qualified or trained to do anything else.

Strongly agree _____ Strongly disagree

5 Using pictures in tests is childish – learners won't take such tests seriously.

Strongly agree _____ Strongly disagree

6 I just don't see or hear some of the language mistakes my learners make, so I can't correct them.

Strongly agree _____ Strongly disagree

7 Asking learners to assess each other is not fair, because the learners may be biased. Also, they don't have enough expertise to identify mistakes and give suitable feedback.

Strongly agree _____ Strongly disagree

8 If a learner fails a test, it is usually because they didn't prepare for it properly.

Strongly agree _____ Strongly disagree

Compare your ideas with our comments in the Key, which deal with many of these issues.

CASE STUDY

Here is a description of how a biology teacher assessed her learners using a *poem poster* presentation. The assessment is for first-year CLIL learners (12/13-year-olds). The class has been working on the topic of classification.

Content aims

At the end of the lesson series, learners can:

- identify the main characteristics of animals;
- classify them using standard biological classification terms.

Language aims

At the end of the lesson series, learners can:

- use language creatively to write a poem;
- use accurate scientific language to describe animal features.

At the end of the unit, the teacher assesses the learners' progress in both content and language.

31 Poem poster instructions for biology

My favourite (in)vertebrate animal

- Choose a partner, and get started.
- Together, choose your favourite invertebrate or vertebrate species (Dutch: *soort*). For instance, if you like worms, you can choose the earthworm.
- 2 groups maximum can choose the same animal.

The assignment

1 The final product: in pairs you are going to produce a 'Poem Poster Presentation': a poster with a **self-made poem** about the organism of your choice, complete with **illustrations**. On the back, you list your **sources** (websites and reference books you have used).

2 The procedure:
You have to search for information on the following questions (A-H):
   a To which group does your animal belong? (Kingdom - Phylum - Class - Order - Family - Genus - Species)
   b What are the main features of the animal? Important body features are:
      1 The number of legs and/or wings.
      2 The body parts (like head, thorax, abdomen).
      3 Does the organism possess visible segments (like in the abdomen of a wasp or in the body of an earthworm)?
      4 Does it possess antennae or tentacles?
      5 What about its symmetry? Is the body radially symmetric, bilaterally symmetric, or asymmetric?
      6 How big is the animal?
   c What is its natural habitat (= its natural home)?
   d What does it feed on?
   e How does it reproduce? (by laying eggs, etc.)
   f Does your favourite have any natural enemies?
   g Is it adapted to a cold/hot/wet environment?
   h Is the animal under threat (Dutch: *bedreigde diersoort*)?

i List your materials on the back: titles and authors of books, titles and editors of CD-ROMs, full names of websites.

j Use the information to write a POEM that describes your animal. The poem should have about 12 lines in which you describe your animal. Remember: a poem does not have to rhyme. Make correct use of English grammar! (verb forms, adjectives, adverbs and prepositions)

k Make drawings or other illustrations of the animal. Complete the poster (A3 format).

Here is an example of one of the posters the learners made.

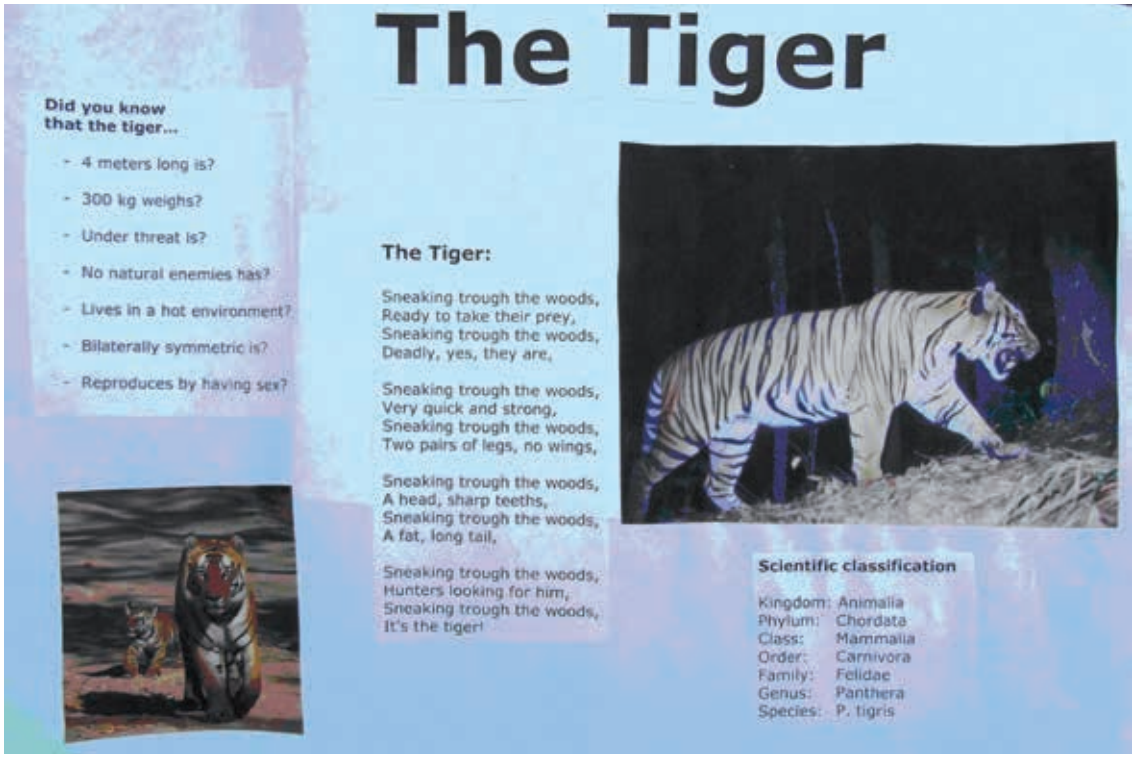


Figure 5.1 Poem poster 'The Tiger' made by a pupil

These are possible assessment criteria based on the aims of the assignment:

- The poem's content: the information is correct and clear, the classification is given and at least 8 features are included.
- The poem's language: the text is poetic, the grammar is correct, the adjectives are interesting, punctuation is clear.
- Poster layout: the illustrations and text go together; the poster is attractive and inviting
- Co-operation: work has been shared fairly; work has been done in the time given.

WHY IS THIS CLIL?

The teacher assesses subject content, language, task achievement and co-operation. The assessment rubric makes it clear to the learners what results the teacher is expecting and how she wants the learners to co-operate. Subject-wise, she wants to see accurate scientific classification and the correct terminology. She also wants the learners to present their work attractively, to use accurate English, and to be creative in their use of adjectives. Criteria like these help make the required standard of work clear to both teacher and learners. The assignment encourages learners to pay attention to subject-specific concepts and to use language both carefully and creatively. By rewarding this, the teacher encourages the learners to be accurate in subject content and language and to use language meaningfully, both to communicate

scientifically and to engage their audience. The assessment and feedback meet the ten 'assessment for learning' criteria (see Background Information section 4) in the following ways:

1 the assessment is clearly planned;
2 it focuses on how learners learn both content and language;
3 it is central to classroom practice;
4 by spending time 'upfront' on designing the assessment, the teacher demonstrates this key skill;
5 the assessment is both sensitive (it leaves room for learners' creativity and imagination) and constructive (the assessment criteria are formulated positively);
6 the assessment fosters learner motivation by allowing learners to use a variety of styles (visual and kinaesthetic) as well as their creativity and imagination;
7 it promotes a shared understanding of the criteria by stating them clearly;
8 it recognises a range of achievements (visual, imaginative, linguistic, and factual);
9 it allows for *self assessment* by making the criteria transparent;
10 it provides constructive guidance to learners about what is expected of them, so that when they receive a grade, they can clearly see how the grade was reached.

BACKGROUND AND THEORY

1 ASSESSMENT

All teachers gather information about their learners' progress and make judgments about how successful their learners have been in mastering the required subject-specific skills and knowledge. In this chapter, we assume that both subject and language teachers already have knowledge of and experience in assessing learning in their own specialisation. Our focus here is on assessment issues specific to CLIL. We highlight recent thinking about assessment that is particularly relevant to CLIL, and suggest approaches that enhance the learning of both subject content and language. Assessment is sometimes used as a tool to find out what learners do not know, rather than what they do know. This type of assessment can create fear of failure and provide confirmation to a learner or teacher that a learner is not very bright. When used for promoting learners to a higher level (or demoting them to a lower level), assessment is primarily a negative tool. We would like to suggest that the aim of assessment in CLIL is to support the learner's academic and linguistic development, rather than to decide a learner's academic fate.

2 WHY ASSESSMENT?

Assessment influences the way learners learn. It is one of the most powerful tools that teachers have at their disposal for steering their learners' behaviour. If a teacher tests facts, the learners will learn as many facts as they can. If a maths teacher tests the learners' ability to measure accurately by subtracting a mark every time their measurement is inaccurate, learners will measure more carefully. If teachers give high marks for answers showing critical thinking, learners will attempt to be more critical in their work. It follows, then, that if a teacher assesses their learners' language use, learners will pay more careful attention to how they use language.

Assessment is an important source of information about bilingual language-learning needs and progress. It can provide information about what kind of language learners need to perform well in a subject. It can give insights into how much of this language learners already know, and what language they will need to perform better. This helps teachers prepare their learners for future assessments. Looking at the language and content areas learners have difficulty with, teachers can find new ways for learners to overcome these difficulties. In addition, teachers can create assessments that push their learners to perform at a level just beyond their present language ability. In this way, assessment helps teachers support bilingual learners more effectively. Using assessment as a resource, its aim becomes more than just providing learners with a grade for a report card. Instead of expressing progress as a mark out of 10, the aim of assessment is to find out what content and language learners still need to work on.

3 THE IMPORTANCE OF ALIGNMENT

Alignment means setting up classroom activities that help learners achieve the lesson aims. If the aims, activities and assessments teachers create for their learners are aligned (i.e. match well), the influence of the teacher on the learning is at its greatest (Biggs, 2003). If, in addition, the assessment is carried out in a way that shows whether learners have achieved what teachers wanted them to, then the aims, activities and assessment are in alignment.

A simplified CLIL version of how learning outcomes, learning activities and assessment interconnect (based on Biggs, 2003) looks like this:

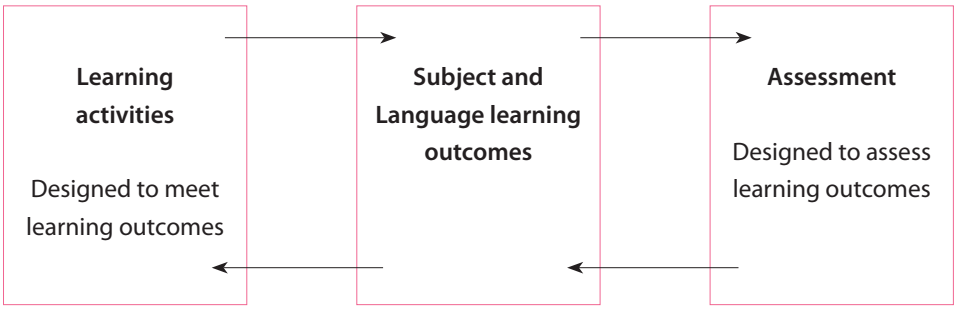


Figure 5.2 Constructive Alignment for CLIL

This illustration shows that subject and language learning outcomes are at the centre of the teaching and learning process. The learning activities are designed to help the learners achieve these outcomes. The assessment is designed to find out whether the learners have achieved the outcomes. The assessment leads to the formulation of new learning outcomes, based on what the learners have demonstrated they can do.

Picture a classroom in which all the learners are carrying out activities related to a unit in their course book. The activities all encourage interaction and extended, critical answers in English. But then, at the end of the unit, the learners sit a written test requiring short, one-word answers about facts. Unfortunately, the value of the interaction is not reflected in the type of assessment here. This is to say, the activities and assessment are not *aligned*. Strategic learners will quickly realise that they only need to cram and reproduce facts to get good grades. In the worst case scenario, they might stop thinking critically, their participation in class will drop, and they will make sure they can recite bits of information on command. Had the teacher designed a form of assessment that required learners to interact and think deeply about the unit material, the classroom activities and the assessment would have been aligned.

Alignment is particularly important in CLIL because of CLIL's *dual focus* on subject content and language. If subject content and language are not both assessed, some of that dual focus is lost. The poem poster example at the beginning of this chapter shows how a subject teacher can assess both: by asking for accurate scientific information and classification (a focus on content), but also for creative use of language in a poem (a focus on language).

4 ASSESSMENT *OF* LEARNING VERSUS ASSESSMENT *FOR* LEARNING

We have just seen that the form of assessment influences how learners learn and prepare for tests. This is sometimes called the *backwash effect*. Understanding the ways in which different types of assessment influence learning has led to a distinction between assessment *of* learning and assessment *for* learning. Other frequently used terms are summative and formative assessment. One way of expressing the difference between the two is to think of the assessment's purpose.

Assessment *of* learning provides a summary of what a learner knows. It measures and reports learners' progress to themselves and to teachers and parents. An in-class biology test in which learners answer multiple choice questions about classification, or classify a number of animals, tests how much the learners know about classification and whether they can classify animals accurately. To pass the test, they will learn the needed facts and reproduce these in the test.

Assessment *for* learning (AFL) is used in the classroom to *raise* learners' achievement rather than simply measure it. AFL is based on the idea that pupils will improve most if they understand the aim of their learning, where they are in relation to this aim and how they can achieve the aim or fill the gap in their knowledge or skills. This means setting assessment tasks which clearly expose these gaps to learners and teachers, and which create a need to close them.

Of course, any teacher makes careful choices about the most suitable form of assessment. CLIL teachers, however, need to make even more informed choices. On the one hand, they need to ensure that the integration of subject and language does not get in the way of learner performance in tests of subject-specific skills and knowledge. On the other hand, they need to ensure that the means of assessment reinforces the learning of subject *and* language. The poem poster in Example 31 requires learners to do more than just reproduce facts. They have to gather information from a variety of linguistic sources, expand their written language skills, and combine the information into a new, meaningful whole.

The Assessment Review Group (2002) suggests ten research-based principles to guide AFL classroom practice:

AFL should:

1 be part of effective planning of teaching and learning;
2 focus on how students learn;
3 be recognised as central to classroom practice;
4 be regarded as a key professional skill for teachers;
5 be sensitive and constructive because any assessment has an emotional impact;
6 take account of the importance of (and foster) learner motivation;
7 promote commitment to learning goals and a shared understanding of the criteria by which they are assessed;
8 recognise the full range of achievements of all learners;
9 develop learners' capacity for self-assessment, so that they can become reflective and self-managing;
10 provide constructive guidance for learners about how to improve.

5 FORMS OF ASSESSMENT

Assessment of learning and assessment for learning are different approaches involving different methods of collecting information about the learners' progress. Assessment of learning uses written or spoken tests consisting of open or closed questions, presentations, essays or reports, completed under exam conditions and resulting in a mark for the learners. Assessment for learning can involve a wider variety of techniques. Examples include:

- informal classroom observations of learners as they perform group work (biology: an experiment; history: a discussion task);
- performance assessment of a role-play (history: William of Orange meets Willem Alexander);
- presentation (mathematics: the number of helium balloons required to lift a sixteen-year-old boy off the ground);
- assessment of an authentic product (geography: a brochure for visitors to your town drawing attention to geographical features);
- situated/contextualised assessment (biology and geography: a written report for a zoo on how to reduce energy costs by introducing more sustainable policies);
- exhibition assessment (any subject: a poster, a portfolio which is exhibited in school).

Baker (2006) points out that bilingual learners perform better when a *range* of assessments is used, such as in the illustration above. This allows learners to demonstrate their progress in ways that involve language to a lesser or greater extent, so that language limitations do not always negatively affect their grades. Using a range of assessments allows learners to work with *visual support*. This gives them the opportunity to show their understanding in many different ways, not always involving language. This limits the risk that using a second language negatively interferes with content performance in assessments.

6 ASSESSMENT FOR LEARNING: PROS, CONS AND RECOMMENDATIONS

There are pros and cons to using assessment for learning for CLIL. The following tables summarise these, and make recommendations on how to deal with the cons.

Pros	
Real world	Assessments which are similar to real-world activities are more meaningful and relevant to learners, and thus more motivating.
Skills practice	By practising using skills in different contexts, bilingual learners are more likely to transfer skills from one context to another and use a wider range of skills.
Missing subject knowledge	Learners are more likely to see the gap between their present level of subject knowledge and what they need to know to perform well in real world tasks.
Completeness	The results of a range of assessment tasks give a more complete picture of a learner's ability in both the subject and the language.
Time spent learning	Learners spend more time on assessment for learning tasks, which means they spend more time using their subject and language skills.
Missing language	Learners will notice gaps in their present level of language and the language they need to perform well in the subject.
Fairness	Some learners perform better in different types of assessments. A range gives all bilingual learners a chance to succeed because it takes multiple intelligences and different learning styles into account
Use of strategies	Learners need to use strategies to carry out assessments for learning, for example, language-learning strategies such as using a dictionary, describing a word they do not know.
Less pressure	Learners with fear of failure may feel less pressured by AFL.
Relevance	Parents may appreciate linking assessment to the real world.
Efficiency	Assessments can be re-used more often than traditional pen and paper tests.
Coaching	Teachers can spend more time coaching learners to produce high quality work, rather than marking unsatisfactory work.

Cons	
Time	Designing, grading and organising assessments for learning can be time-consuming for the teacher.
Lack of clarity	Some learners become frustrated when they have to spend a lot of time carrying out an assessment for which the rewards are not clear.
Subjectivity	Grading may seem subjective to learners and parents.
Avoidance	Group work assignments may allow individuals to disguise what they do not know or allow them to avoid practising skills in which they feel less competent.
Copying	Learners may simply cut and paste from the Internet or other sources.
Dislike of group work	Some learners do not like working in groups.
Lower grades	Some learners will perform better in traditional tests than in more alternative forms of assessment, so they will dislike them.
Distrust	Parents, learners and teachers are used to traditional tests and may distrust the more innovative assessment for learning.

Recommendations	
Time	Design assessments in teams and involve the learners in the design of assessments. This helps teachers make their expectations of learners clearer both to themselves and to their learners. This saves time in the end, as the learners will perform better and need fewer attempts to pass.
Continuity	File and keep your assessments to re-use them with other groups in the future. AFL can be re-used more often than tests, as it does not depend on learners not knowing what they are going to be tested on. That makes the initial time investment worth it in the long term.
Team development	Design assessments as a team. This can be classified as professional development: it helps teams develop a consistent approach to learning and teaching.
Subjectivity	Use *rubrics* to assess content and language (see Background Information section 8) and have several different people assess learners this way.

Avoidance	Allocate roles and assess individual contributions to group work (see Chapter 6 for more ideas).
Copying	Design assessment tasks that require learners to use information in such a way that they cannot cut and paste.
Dislike of group work/lower grades	Use a range of assessments, including individual assessments, so that higher and lower grades can be compensated. Allow learners some choice in the people they work with.
Distrust	Make the learning outcomes visible to the learner. Stress that the assessment requires cognitive effort; it is more than just regurgitating facts. It often helps to explain the benefits behind AFL to parents.

7 WHY ASSESS LANGUAGE?

Thinking and language are interdependent (see Chapter 4). If the way learners approach assignments is influenced by the way teachers assess them, then assessing their language use will encourage them to pay attention to it. This will not only help to improve learners' language use, but also their subject knowledge, since language reinforces subject concepts. Encouraging learners to focus on the language they use to express their ideas helps them understand subjects better. Marking learners' work on language will help improve their language in all subjects, and motivate them to focus on using language carefully to express their ideas. This will make them more aware of the importance of language. It will also give subject teachers information about the language difficulties their learners are having. This allows them, or the language teacher, to tailor their teaching to the learners' needs.

8 WHAT ARE RUBRICS?

When traditional pen-and-paper tests are supplemented or replaced by the more varied forms of assessment which fall under AFL, the issue of how to grade arises. A widely used and practical solution is to create a rubric. A rubric is an assessment tool in the form of a matrix, which is used to evaluate a learner's progress based on a range of criteria, rather than on a single score. It consists of rows listing characteristics that will be assessed (criteria), and columns listing the qualities of each characteristic. Each description in each rubric's cell is called a descriptor.

Rubrics and descriptors have two features:

1 measurable criteria (for example, accurate biological classification, punctuation, accuracy);
2 descriptors of (usually) four aspects or points to rate the quality of performance (for example, poor, average, good, and excellent; or a scale of 1-4).

Example 32 shows a rubric for the poem poster in Example 31. Each of the requirements from the teacher's original assessment criteria are included. We have limited the criteria to a maximum of four, for ease of use. Putting the maximum score in the first column, as is the case here, has the advantage of showing learners the highest grade first, making it more likely that they will aim for this. Making high expectations explicit in this way can be very motivating.

32 Rubric for poster assignment

Criteria	Descriptor			
	4	3	2	1
The poster (content)	The scientific classification is correct and complete, and at least 8 accurate facts are displayed on the poster. All required elements are included.	Most of the scientific classification is correct but not complete; 5-6 accurate facts are displayed on the poster. All or nearly all required elements are included.	Some of the scientific classification is incorrect; 3-4 accurate facts are displayed on the poster. Several required elements are missing.	Little of the scientific classification is correct. Less than 3 accurate facts are displayed on the poster. Many of the required elements are missing.
The poster (layout)	The poster has been creatively and neatly made and invites the reader to have a closer look. The illustra-tions and text go well together.	The poster is attractive in terms of design, layout and neatness. Illustrations and text are clearly linked.	The poster is acceptably attractive though it may be a bit messy. The link between illustrations and text is not always clear.	The poster is messy or poorly designed. There is no clear link between illustrations and text.
The poem (language)	The language and punctua-tion on the poster is (almost) error-free. The (6 or more) adjectives bring the animal to life.	There are a few language and/or punctuation mistakes but they do not hinder under-stand-ing. The poem uses 4 or more adjectives which create a good picture of the animal.	The mistakes in language or punctuation prevent the reader from reading fluently. The poem uses at least 3 simple adjectives to describe the animal clearly	There are many language and/or punctuation mistakes which make it hard to understand the poster well. The adjectives are not relevant or there are fewer than three.

Team work	The team worked well together and completed the poster in time. Occurring problems were solved quickly.	The team experienced problems working together but managed to solve them on its own or with the help of the teacher. The work was finished in time.	The team experienced problems working together which prevented good team work. The team spent too long on the poster, or, alternatively, should clearly have spent more time.	The poster is the result of two people working separately. The poster was not ready in time, or time was not used effectively.

If we assess the tiger poster (see Figure 5.1) using the criteria in the rubric, we can come to the following conclusion:

- The scientific classification is correct, and there are seven facts. A great deal of information is missing, as there is no information about, for example, habitat, reproduction, feeding and prey. (2 points)
- It is attractive in terms of design, layout and neatness, but the illustrations do not show the features that the poster emphasises. (2 points)
- The poem uses *deadly, quick, strong, sharp, fat* and *long* to describe the tiger and its features. These are effective, and along with *sneaking* evoke the animal well. (4 points)
- The team had some problems but managed to solve them by themselves. (3 points)

This gives an overall mark of 11/16, which is 68%, or 7 out of 10.

This rubric shows how aims, activities and assessment can be aligned to create a learning environment in which both subject and language skills can be developed and learners are actively guided to produce work of a particular standard.

Here is another real-life example that was used to assess the Sahara Project in Chapter 6.

33 Rubric for geography assignment

Desert project rubric				
Criteria / Descriptors	**Excellent 9-10 points**	**Good 7-8 points**	**Adequate 6 points**	**Poor 1-5 points**
Use of language	Vocabulary includes many unit words; grammar and spelling are almost perfect; sentence structure and word order are correct English.	Vocabulary includes unit words; grammar and spelling are very good; sentence structure and word order is mostly correct English.	Few unit words included; language is simple; quite a few problems in spelling, grammar, sentence structure and word order.	Vocabulary is very simple; spelling, grammar, sentence structure and word order are not correct English and interfere with understanding the content.
Layout and attractiveness	Absolutely professional!	A good effort was made to make the project attractive; the layout was well thought-through and has creative touches.	Project is reasonably attractive, but little effort was put into layout. Project simply follows order of instructions.	If I received this in the mail it would go into the garbage before I read it.
Content and research	Content details were not only correct, but also thorough, and included extra information; it is obvious all aspects of the project were well researched.	Most of the details of the content are correct; some aspects of the project were well researched; little extra was added to the content however; no evidence of plagiarism.	Some incorrect information included; information not thorough; research appears fairly superficial; no extra information added; some evidence of plagiarism.	Many false statements and facts; information very superficial, no evidence of research; too much of project was plagiarised.

Is your expedition proposal realistic?	It would be possible to take this trip just as you described it!	A few minor problems with plans, but much of the trip proposal is possible.	Many problems with plans, trip not possible.	Great chance of dehydration, starvation, injury and possibly death! I think I'll stay home.
Work habits	Your work was finished properly and on time, your group shared tasks fairly and you followed directions completely.	A few touches to project left until last minute; task division somewhat unfair; one or two directions missed.	Project late; group did not share tasks fairly or co-operate well; some directions missed.	Project late; one person did most of work; directions not followed.
TOP: **TIP:**				**GRADE:**

In this rubric, the language is personalised to the group of learners: it seems to speak directly to them. This can make a rubric more accessible to learners, although the tone may not suit everyone (whilst some learners may be amused by their work being thrown in the bin, others may not). Plagiarism may also be dealt with differently, as some schools award an automatic grade of 1 if work is plagiarised. This rubric fits in with the traditional Dutch school system, as it uses the 1-10 scale.

9 WHY RUBRICS?

The fact that a range of criteria can be incorporated into a rubric makes it a very useful tool for CLIL teachers, because it can make the assessment of subject and language more visible to everyone involved in the learning process (learners, teachers, colleagues and parents). A rubric can be handed out along with the assignment instructions, and in this way, shows learners how they are going to be judged before they start. Knowing the criteria by which they will be assessed motivates them to make sure their work meets these criteria.

Rubrics also support learning in that they provide feedback to learners. To benefit from feedback, learners need to (Sadler, 1989):

1 understand what is expected of them;
2 compare their level with the expected level of performance;
3 work on closing the gap between what is expected of them and their current performance.

In other words, rubrics can help learners understand the standard of work expected of them in a number of ways. Rubrics enable learners to see how their work compares to the standard expected, and to find out what they need to do to improve their work. Another advantage to using well-designed rubrics is that once designed, they can reduce the amount of time CLIL teachers spend on evaluating their learners' assignments.

There are three moments in the assessment process where rubrics can be used: at the start of an assignment to clarify assessment criteria, during an assignment for self assessment or peer assessment, and at the end of an assignment to award a final grade.

10 HOW TO MAKE RUBRICS

It is of great importance that the subject content and language aims, the activities the learners carry out, and the assessment are all aligned. This is why the best time to start creating a rubric is at the planning stage, when the aims, activities and assessment are being determined. In the rubric in Example 32, the original subject and language aims are reflected in the assessment criteria. From your aims, select the range with which you want to rate learners' performance, and then create descriptors. Many websites provide examples of rubrics or interactive templates which allow teachers to select categories they would like to assess. For example, try Rubistar: rubistar.4teachers.org/index.php.

Rubrics can be developed by teachers, individually or in groups, but also together with learners. The advantage of developing rubrics with a group of teachers is that the assessment criteria become clearer as you discuss them. This sort of co-operation in a CLIL team helps the department develop a uniform and transparent approach to learners.

A similar process is involved if rubrics are developed in co-operation with learners. Learners who think about what makes a good piece of work, will consider what is expected of them and gain more autonomy. It gives them a greater sense of influence over what is assessed, leading them to become more focused and self-directed. It may be time-consuming, but it can be effective. For step-by-step guidelines on how to make a rubric together, see Assignment 59.

11 PEER AND SELF ASSESSMENT IN CLIL

In peer assessment, learners use assessment criteria to assess each other's work. A reason often put forward for using peer assessment is that it saves teachers work. Actually, using peer assessment changes the way teachers work, and leads to them spending more time on, for example, defining clear assessment criteria, and less time on marking work. Peer assessment is particularly important in CLIL because it can help the learners understand what is expected of them. By reading a fellow learner's lab report in biology and deciding what is good about it and what needs more work, learners develop a clearer idea of what makes a good lab report in terms of both subject and language. This will help them produce higher quality lab reports themselves. By acting as an audience for a written text, learners start to grasp how clearly they need to express their ideas for a third person to understand them. This can help improve both language skills and subject skills. Experiencing the effect of unclear language, spelling mistakes or confused ideas themselves, will encourage learners to use language more carefully to put their ideas across.

Peer assessment can also act as a first step towards self assessment. Once learners have practised checking other people's work, they will be better able to look at their own work with the eye of an outsider. They will gradually become better at critically assessing their own work. In addition, peer and self assessment gives learners tools to monitor their own progress, which helps make them more independent.

Peer and self assessment makes learners more aware of the effect of their spoken and written work on their audience. The awareness that their work is produced for an audience also motivates them to produce work of a higher standard. Seeing their work through the eyes of strangers helps learners to be more critical of what they are producing and they may be less willing to lose face in front of a group of strangers than in front of their teachers or peers. Peer and self assessment help learners produce work of the required standard, making these tools particularly relevant to CLIL.

Using rubrics for peer or self assessment can reinforce the learners' understanding of what is expected of them. Developing the ability to judge the standard of their own and their peers' work can help learners achieve the required standard.

APPLICATIONS IN CLIL

1 ASSESSMENT AND THE CUMMINS' QUADRANTS

Baker (2006) shows how a teacher can choose to use different strategies to teach, for instance, the concept of height. He explains how a teacher might assess learners' work differently in different situations. Table 5.1 shows different types of assessment in relation to teaching strategies.

	Teaching strategy	Assessment	Comment on the context, thinking required and language demands
A	Learners use objects to measure height.	Ask learners to measure the height of a new object.	Lots of context (objects), low cognitive demand, only incidental use of everyday language.
B	A demonstration from the front of the room in which the teacher measures different objects.	Ask learners to explain what they are doing as they measure a new object.	Lots of context. The learners can use objects to demonstrate what they mean but they have to produce some language to demonstrate understanding of the concept. The conversation is interactive, so prompts from the teacher can support the learners.
C	A teacher presentation about measuring without using objects.	Ask learners to write an explanation of how they measure height.	Less context: the learner has to produce extended prose without a listener indicating immediately what is not clear in what they say. They have to refer to objects in the text rather than demonstrate what they mean using objects. The cognitive demand is greater as they need to think in more abstract terms, and this makes the assessment more demanding in terms of language.
D	Learners read an encyclopaedia description of the development of different forms of measurement (thumbs, pieces of string, sticks, matriculated measuring sticks)	Discuss the concept of height by asking abstract questions such as *How many ways of measuring height can you think of, and which is the best way?*	The context is very reduced: no objects, no pictures, and the concept is complex, involving judgment. The language used to answer the question will involve evaluating, explaining and justifying.

Table 5.1 Teaching strategies and assessment

Each of these teacher strategies, along with the aligned means of assessment, can be positioned on the axes of Cummins' Quadrants to demonstrate their linguistic demands on learners. This can be a useful tool for designing assessments.

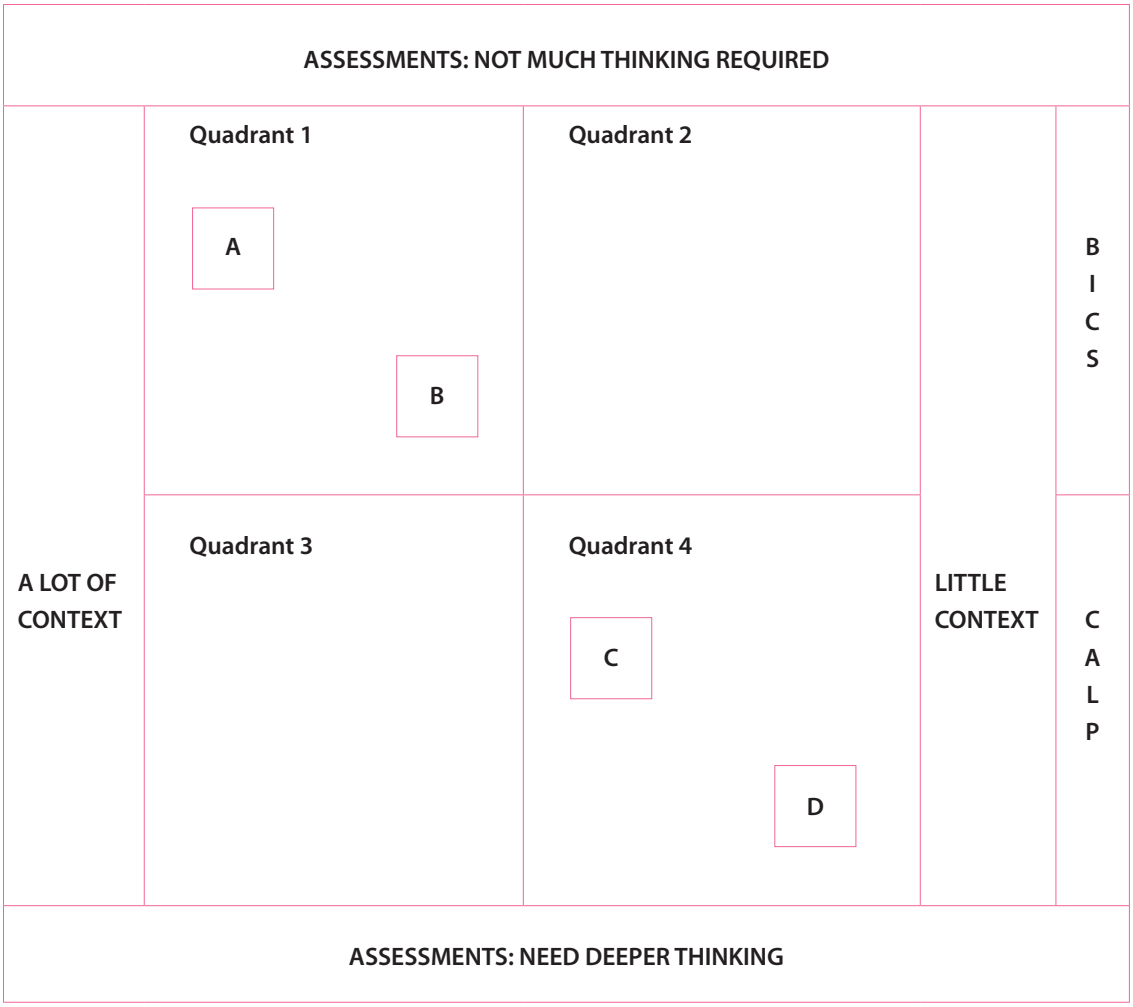


Figure 5.3 Assessments in Cummins' Quadrants

It can be tempting to create assessments for second language learners which require very few language skills and understanding. This keeps learners busy, and prevents them from creating work with many mistakes, but these kinds of assessments do not challenge learners linguistically or cognitively. Assessments requiring the thinking skills in Quadrant 3 or 4 will help learners to develop CALP.

34 History assessment

Below is an example of a history assessment that allows learners to demonstrate understanding of the changes that took place between 1350 and 1600 with hardly any use of written language. A spoken presentation explaining these two posters could gauge language and understanding.

Figure 5.4 Posters by a pupil at Cals College, Nieuwegein showing historical change from 1350 to 1600

Here are the teacher's comments on using this form of assessment.

"In this exercise, 4-vwo students had to show their understanding of historical change by visualising it in two drawings. They were given a big piece of paper. On one side they had to write the year 1350, on the other, the year 1600. They were also given key words and phrases which they had to visualise in their drawings, such as *guild, reformation, inquisition, development of science, explorations, trading Renaissance, Roman Catholic dominance*. They were not told which words matched which year. They also had to write a short explanation in which they explained the features of their drawing. This exercise was one of several exercises which we tried to match with Howard Gardner's multiple intelligence theory. Students had to choose one of the exercises.

One student chose this exercise and came up with the two drawings shown. In the 1350 drawing he uses the bulletin board, the guards (crosses on their clothes) and the big Gothic church to show the dominance of the Roman Catholic church. The inquisition is visualised as a stake in the middle of the drawing. The word *guild* is expressed in the blacksmith and also mentioned on the bulletin board. The student also took a careful look at the architecture of Medieval cities and at Medieval fashion.

In the 1600 drawing, one can see reformation in the sober architecture of the church (although he made a little mistake depicting a holy person in the too-elaborate stained glass window), renaissance in the person holding the Vetruvian man drawing, the bulletin board and the statue which stands alone on a socket. Exploration can be seen in the harbour and bulletin board; trading is visualised with a little market in the background. Science we see in the bulletin board and the man holding the Vetruvian man drawing. Again the architecture and fashion of early modern Holland were carefully considered.

This student has great difficulty putting his knowledge into a written answer. This exercise gave him the opportunity to show his knowledge in a different way."

Figure 5.5 Teacher comments on alternative assessment

35 Geography test

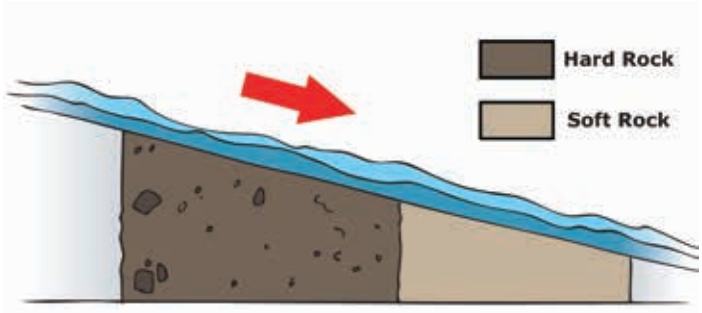
Below are examples of different questions in a geography test which are cognitively quite demanding and provide the learners with different amounts of context. Question 3 asks learners to show their understanding and knowledge of how a waterfall develops by drawing and labelling a diagram. The language is clearly in a particular context, and by already providing one diagram, the teacher demonstrates what is expected. The learners will be able to show their subject knowledge without having to use a large variation in language. Question 4 also gives a great deal of context: the meaning of the words is given, and the learners only need to be able to recognise them in a word search. Thus, learners with limited *productive skills* but strong *receptive skills* can still demonstrate their subject knowledge. Question 5 asks learners to match the words to the diagrams; it provides visual support through the diagrams. This allows learners to show their understanding, but does not require language production. Question 6 is more linguistically challenging: the learners need to produce language explaining the diagram. Questions 7 and 8 are more open and require learners to produce much more language. These questions provide less context than the previous ones.

Question 3

Look at Figure 3: Stage 1 in the development of a waterfall. Draw Stage 2 of this development on your answer sheet. Don't forget to label your diagram:

Figure 3

Stage 1:



Stage 2:

Question 4

Parts of rivers have special names. There are four names for parts of a river in this word search. When you have found them, write the correct word next to each meaning. Use the word search only if you need help.

T	R	I	B	U	T	A	R	Y	F	L	B
A	Q	Q	U	V	K	C	I	L	R	E	Q
C	H	B	B	K	B	A	O	P	X	N	J
U	N	Q	V	T	V	O	O	A	N	N	P
Z	Q	K	D	A	D	W	Y	V	H	A	H
X	M	D	R	P	I	Z	R	E	Y	H	D
J	V	X	L	Q	X	I	N	O	Z	C	W
P	R	A	X	J	O	P	U	Y	J	R	M
R	I	E	C	N	E	U	L	F	N	O	C
N	F	G	M	K	I	M	K	D	N	Y	G

a A smaller river which joins a larger one is called a _____

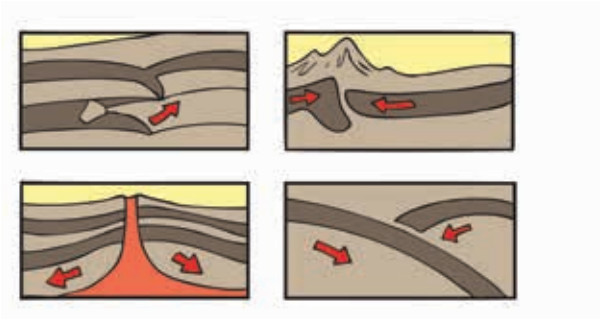
b The point where the rivers join is called a _____

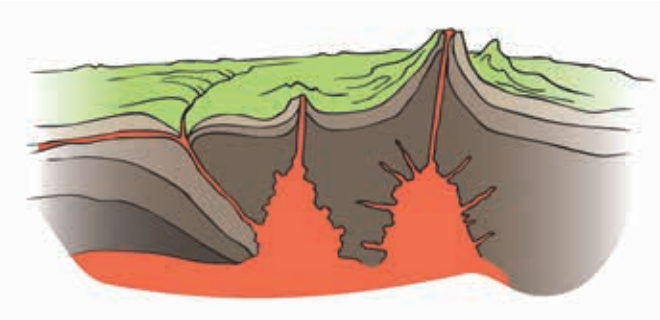
c The river flows in this: _____

d The flat land on either side of the river when it gets near the sea.
The river might flood onto this land: _____

Question 5

Label the following 4 diagrams with the best possible word.
conservative margin, spreading ridge, subduction zone, collision zone





Question 6

Use the diagram above to help you describe a subduction zone in some detail. In other words, say as much as you can about what it is, and what is happening at this kind of plate boundary.

Question 7

What is the Human Development Index?
What is the major difference between the HDI and GNP?

Question 8

A group of Zambian students were asked what development meant. These were the ideas and indicators they talked about:
FREEDOM, POPULATION GROWTH, EDUCATION, MONEY FOR INVESTMENT, TECHNOLOGY, EQUALITY, CRIME AND PUNISHMENT, HEALTHCARE, NATURAL RESOURCES, TRANSPORT AND INFRASTRUCTURE

1 List two indicators that are difficult to measure.
2 List in order the three indicators that you think are most important to encourage development. Back up your choices in paragraph form.
3 Do you think that the number of mobile phones per capita makes a good indicator of development? Why?

Below is a good example of providing extra language support at the beginning of the test to help learners understand instructions in the test.

Name: _____

Year three geography
unit test: development
april 2008

Annotate	put on labels
Assess	weigh up the importance
Compare	describe and explain the similarities and differences
Contrast	describe and explain the differences
Define	give the meaning of the word
Describe	what does it look like, state the main characteristics, patterns and exceptions
Discuss	give different points of view
Examine	look closely
Explain	give the reasons why or say what the results mean
Identify	point out and name
Locate	state where a place is
Name	give or list
Outline	note the main features
Quote	copy something word for word from the text and put it in quotation marks
Quote map evidence	use examples directly from the map or graph to back up your point
Select	choose
Suggest	put forward an idea or reason

Figure 5.6 Language support for instruction language

2 PRINCIPLES OF ASSESSING BILINGUAL LEARNERS

CLIL teachers need to consider the assessment of both language and subject. They might ask themselves: *How can I assess my learners' language? How can I simplify assessment so that learners can show their understanding of my subject without the language getting in the way? Can I make oral assessments? How can I use peer assessment? How do I assess written work both for the language level and the subject level?*

Since CLIL lessons involve language acquisition and subject content, it makes sense to assess language and content in an integrated way. Here are some principles for assessment that support subject and language learning, based on the Qualifications and Curriculum Authority (2000).

Principles of assessing bilingual learners

The assessment of bilingual learners should follow the same principles of effective assessment of all pupils. It should:

- recognise what pupils can do and reward achievement (a good rubric does this);
- be based on different kinds of evidence;
- be a valid reflection of what has been taught or covered in class;
- be reliable in terms of enabling someone else to repeat the assessment and obtain comparable results;

- be manageable, both in terms of the time needed to complete the task, and in providing results which can be reported or passed on to other teachers.

In addition, teachers assessing CLIL learners should:

- be clear about the purpose of the assessment, distinguishing summative, formative and diagnostic aims;
- be sensitive to the pupil's first or main other language(s) and heritage culture;
- take account of how long the pupil has been learning English;
- assess in ways that are age-appropriate;
- focus on language, while being aware of the influence of behaviour, attitude and cultural expectations;
- recognise that pupils may be at different levels of attainment in speaking, listening, reading and writing.

As this demonstrates, a common concern is how to make sure that language is not a barrier for learners to demonstrate subject knowledge or understanding. From a CLIL perspective that embraces assessment for learning, we suggest moving one step further. The concern is not only how to construct assessments that allow learners with limited language skills to do well, but also how to use assessment to steer and foster or ratchet up both subject and language learning, and how to give feedback that will help learners develop knowledge and skills regarding both subject and language. This is also why feedback is important. Learners can make many kinds of spoken or written language mistakes. Knowing the kinds of mistakes learners make when using a second language, possible reasons why they make these kinds of mistakes, and effective ways of dealing with mistakes can help a CLIL teacher decide how to deal with language mistakes and give appropriate feedback in their lessons.

3 THE KINDS OF LANGUAGE MISTAKES LEARNERS MAKE

These are examples of different kinds of spoken mistakes; in pronunciation, vocabulary, style and grammar:

1 In a music lesson: "I saw a jazz band last night. I wasn't all that keen on the singer, but the *sex* was really good."
2 In an economics lesson: "*SMS-ing* is cheaper with this company than the others."
3 In a presentation on Shakespeare: "Hamlet *has lots of problems with his mother*."
4 In a history presentation: "The Second World War *has started* in 1939."

Type of mistake	Mistake	Correction	Comment
Pronunciation	sex	sax	The learner mispronounces 'a' as 'e'.
Vocabulary	SMS-ing	texting	The abbreviation SMS is not always understood by native speakers of English
Style	Hamlet has lots of problems with his mother.	Hamlet has a difficult relationship with his mother.	In a presentation, more formal language is needed.
Grammar	has started in 1939	started in 1939	Fixed points in time use the simple past in English.

Table 5.2 Types of mistakes

Some examples of written mistakes are:
In a history essay: "The French *Revelation* started in 1879."

1 In a biology lab report: "The soil samples *where* collected from a range of sites."
2 In a music review: "The lyrics in this song *was* written by John Lennon."
3 In a history essay: "Churchill *was a guy who* was the Prime Minister of Britain during the Second World War."

These show vocabulary problems (*revelation* instead of *revolution*), spelling problems (*where* instead of *were*), grammar problems (*was written* instead of *were written*) and style issues (*guy* and *Prime Minister* do not go well together in one sentence).

4 THE REASONS FOR SECOND-LANGUAGE MISTAKES

Learners make mistakes for different reasons. Bolitho and Tomlinson (2005) suggest the following reasons:

Reason for mistake	Example	Correct form	Explanation
L1 interference	*The Second World War has started in 1939.	The Second World War started in 1939.	From: *De tweede wereldoorlog is begonnen in 1939*. Dutch uses the present perfect where English would use the past simple.

False analogy	*Hollandish people	Dutch people	Holland - Dutch does not work like England - English or Spain - Spanish.
Overgeneralisation	*The birds flied in a westerly direction.	The birds flew in a westerly direction.	Past tenses in English are usually formed by adding -ed, but in this case the verb fly is irregular and should be flew.
Over-learning	*We wented on a trip to Sweden and boughted some souvenirs.	We went on a trip to Sweden and bought some souvenirs.	The learner has practised adding -ed to verbs to form past tenses, so now adds it to irregular verbs, too.
Ignorance	*Erosion is common were rivers flow over rocks.	Erosion is common where rivers flow over rocks.	A learner may not know *where* and *were* are spelt and pronounced differently.
Incomplete learning	*Churchill is a guy who was the Prime Minister of Britain during the Second World War.	Churchill was Prime Minister of Britain during the Second World War.	*Guy* is informal and not appropriate for a presentation or written text.
Interference from other items (in English or another foreign language)	*Miss, how are you going to assassinate us?	Miss, how are you going to assess us?	Assess and assassinate are pronounced differently, but Dutch learners find the difference between a and e difficult to hear and produce, so may confuse both the pronunciation and meaning.

Table 5.3 Reasons for second-language mistakes

The type of feedback to give learners on a mistake may vary depending on the reason it was made.

5 EFFECTIVE WAYS OF DEALING WITH MISTAKES

The decision on whether to correct language mistakes depends on:

- how significant the mistake is;
- whether the mistake interferes with understanding;
- whether it is a frequent mistake;
- whether the mistake is made because of L1 interference;
- whether it is something that learners have been focusing on recently.

Lightbown and Spada (2006) suggest that focusing on form and correcting mistakes is effective:

- for frequent, persistent mistakes (spelling mistakes such as *where* for *were*, and *to* for *too*);
- for mistakes made as a result of differences between the learners' first language and the second language (The Second World War *has started* in 1939, false friends such as *consequently* / *consistently* or *insulation* / *isolation*);
- for mistakes made in new language structures which learners are beginning to develop (if learners have been learning the past simple in English, correcting tense in history would help);
- for mistakes focused on in other lessons, (if the difference between spoken and written language or formal and informal language is being covered in English and Dutch, focus on it in the subject lessons, too).

Lyster and Ranta (1997) distinguish between six types of feedback on spoken mistakes:

1 **Explicit correction** - Providing the correct form explicitly. The teacher also clearly indicates that what the pupil says is not correct, for example by saying: *Oh, you mean started*…. or *You should say "The war started", not "The war has started".*
2 **Recasts** - Reformulating all or part of the pupil's utterance, without the error: *The war* started *in 1939.* This type of feedback is comparatively implicit. The teacher does not actually say that the pupil has said made an error. Translation of learners' use of their first language is also is considered recasting. (The learner says *isolatie*, and the teacher responds *Indeed, insulation*.)
3 **Clarification requests** - Asking for clarification (*Sorry - the* sex *was really good?!)* or repeating the error (*SMS-ing...?*) to indicate that the learner's usage is inaccurate in some way.
4 **Metalinguistic feedback** - Commenting on the form of the learner's utterance without providing the correct form, for example: *You cannot say that in English* or *What tense is used for a specific date in the past?*
5 **Elicitation** - Attempting to directly *elicit* the correct form from learners, e.g. by strategically pausing to allow them to 'fill in the blank' (*The Second World War... in 1939?*), by asking for an example (*How do you say that in English?*) or by simply asking the learner to rephrase.
6 **Repetition** - repeating the pupil's utterance, without correcting it. Usually, the teacher will highlight the error by adjusting intonation and word stress. (*The* sex *was really good?*)

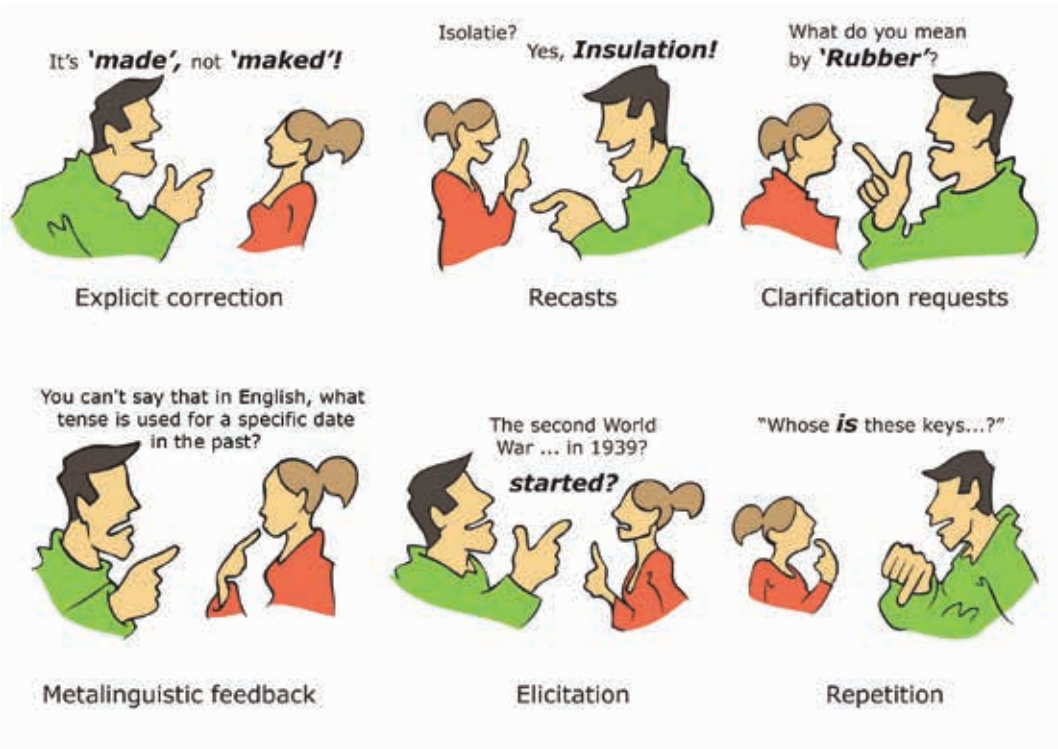


Figure 5.7 Types of feedback

Elicitation and metalinguistic feedback are most likely to lead to a learner producing a correct form, and recasts are least likely to lead to a learner producing a correct form (Lyster and Ranta, 1997). Using elicitation and metalinguistic feedback rather than recasts is the best way to help CLIL learners produce more accurate language.

6 FEEDBACK ON SPEAKING

CLIL subject teachers can face problems giving feedback on their learners' language. They may not be able to explain a grammar rule, or may not know or understand why a learner makes a particular mistake, or what learners find difficult about a grammatical item. They may not even be aware of all mistakes, or be unsure whether something is a mistake or not. How much feedback a subject teacher gives will vary depending on the subject teacher's own confidence in and knowledge about English. In some cases, subject teachers may want to involve the English teacher; more often, they will feel confident giving feedback themselves.

There are a number of ways for subject teachers to give feedback on speaking. As they walk around while learners do assignments, they can note down mistakes learners are making. They can make audio recordings on mobile phones, digital voice recorders or audio cassette recorders, or video recordings on mobile phones and (digital) video cameras. These recordings can be used for peer feedback or feedback for language or subject teachers. Learners can also give feedback on their own language (self assessment) with the help of recordings.

When learners watch or listen to each other and give feedback, it is useful if teachers say what category of mistakes they should pay attention to: pronunciation of key subject words, word stress, grammatical accuracy, intonation, vocabulary range, use of new words, or appropriateness. Different categories can be given to different learners. Using a rubric is helpful.

Here is an example of language assessment is a subject class (based on an approach in Gibbons, 2002). In physics, the learners worked in pairs to solve one of two problems: design either a medieval weapon

(a trebuchet which throws stones) or a small car, using the energy contained in a set mousetrap. The learners first solved one problem; they designed either a trebuchet or car which ran on the energy from a mousetrap. Next, they cross-questioned other pairs as to how they solved the other problem. Finally, using the information from the cross-questioning, they tackled the second problem.

To assess learners' language use, the first step is to identify the language demands of this task. This can be done by describing what they need to do, and then what language (grammar, vocabulary) they will need to do this. In this case, the learners first need to describe the problem, and then report their solution. For that, they will need to use the past tense (for the small car, using words like *accelerated, travelled, mounted, attached*), and appropriate vocabulary to describe car design (*wheels, axles, traction, steering*) and also to give reasons for their solutions (*we tried that because*). The other pair will need to formulate questions (*what happened*, *what did you do then?*), give advice (*you could*, *did you try*, *perhaps it would be better if*) and react to suggestions (*that's a good idea*, *we could try that*, *no, that wouldn't work because*...)

This analysis of the task can form the basis of a language assessment sheet like this, completed for an imaginary learner, Maria:

Language	**Maria's language**	**Possible language work**
Describe the problem	Maria did this clearly.	
Report the solution	Made some past tense mistakes (putted, try). Vocabulary limited, but did describe words (the wheels were slipping a lot, so we used rubber to make it better).	Practice past tenses Vocabulary work
Ask appropriate questions	Asked many WH questions. Some mistakes in questions (How you did? Why you do that?).	Practise question formation
Offer advice appropriately	Used maybe a lot.	Practice modals: could, should, etc.
Acknowledge advice	No examples	
Other comments	Maria spoke more than she usually does, perhaps because she had a lot of ideas about this subject.	

Table 5.4 Language assessment sheet for Maria

These language functions could also be linked to the Common European Framework of Reference and used once or twice a year to assess the learners' CEFR level in spoken English. The CEFR can also be useful for making subject teachers aware of the language functions that learners use in their subject.

Language analysis can be done either by the subject teacher individually or in subject teams; the latter option would raise the teachers' awareness of the problems their learners have. Language analysis can also be done by the language teacher to provide information about language work the learners need to practise. Co-operating with language teachers on language analysis tasks like these can be used for both subject teacher and language teacher development.

7 FEEDBACK ON WRITING

Self assessment, peer feedback and teacher feedback can also be given on written work. This is a thorny issue for language teachers, as there are different views on the role of feedback on form (language mistakes) in teaching writing. Some people argue that feedback on subject content (what learners are attempting to say) is more effective and more motivating than feedback on form (spelling, grammar and punctuation mistakes). Others argue that ignoring mistakes in form reinforces incorrect language usage and creates sloppy writers with bad spelling habits.

In either case, consistency and transparency are important. If teachers are consistent and transparent about what they expect from their learners, these are more likely to produce the kind of written work teachers want to see. Learners need to know in advance what the teacher is looking for: 100% accuracy, a particular sort of English, good ideas, or a balance of these.

Giving feedback on language

If accuracy is paramount, the teacher has a number of options:

- indicate (underline, highlight) all the mistakes;
- indicate selected mistakes;
- use a *correction code* for different kinds of mistakes;
- correct every mistake;
- correct selective mistakes.

36 Corrected writing for geography

Here is an example of a 14-year-old learner's writing for geography. It describes satellite images of the Netherlands. A correction code has been used to indicate where the writing needs more work.

	Visual image and Infrared Image
☺	In this visual image you can see that it was very good weather in the Netherlands on the 17th and 18th of December. There were no clouds over the Netherlands, so there was no rain. This means that there was a high pressure. Now I'm going to describe the clouds:
P, Sp ☼	1 This cloud is very high and very thick. The texture is lompy and there are shadows on the visual image. This is a Cumulonimbus cloud and these clouds will bring heavy rain, maybe even thunderstorms and often strong winds. This cloud area is a swirl of cloud and is formed like a comma. This means that there is a depression above the Atlantic Ocean.

P, prep	2 This cloud is light grey. This means that the cloud is at a middle-level and on
Exp	the visual image you can see that the cloud is very bright so thick. The cloud is lumpy and there are shadows on the visual image. Now you can see that it is a Cumulus cloud and Cumulus clouds bring short, heavy showers of rain.
V, Exp	3 This cloud is grey on the Infrared image, so that means the cloud is low. On the visual image the cloud is also grey so you know that it is a Stratus cloud. Stratus clouds usually care for a bit of drizzle and overcast.
Prep	4 This cloud is the same cloud as by number 3.
	5 This cloud is also the same.
^	6 This cloud is pretty bright on the Infrared image, so rather high and the cloud is also pretty bright on the
^ Exp	visual image, so rather thick. The cloud is lumpy and there are shadows on the visual image. This means that it is a Cumulus cloud. So the same as by number 2. This causes short, heavy showers of rain.
	Well done! Rewrite this and add it to your portfolio of written work for geography

This is the key to the correction code:

Symbol	**Meaning**	**Instruction to the learner**
Sp	Spelling	Try spelling this again
P	Punctuation	Correct the punctuation
V	Vocabulary	Find a different word for this
Prep	Preposition	Change the preposition
^	Missing word	Put in the missing word
Exp	Expression	Rewrite this, to improve the expression
☺	Good language use	Well-written section - apt and clear
☼	Creative language use	Striking or imaginative writing

Table 5.5 Correction codes

It is a good idea for a school to agree on a correction code which all teachers use for all languages (Dutch, English and other modern foreign languages such as French and German).

Deciding when and how to correct language can be difficult. These guidelines may help:

- Correct language that is important for the meaning or purpose of the assignment (i.e. errors that interfere with the effectiveness of the written work. In Example 36: *at the middle level*).
- Correct language mistakes that are a result of first language interference (In Example 36: *care for* comes from the Dutch *zorgen voor*).
- Correct language mistakes that have been practised recently.
- Point out language mistakes and effective use of language that can be generalised and applied in the future to other written assignments.
- Give positive feedback on good use of language.
- Formulate a correction code to instruct learners what action they need to take.
- Explain how you expect learners to respond to your corrections.

Russell Stannard uses screen capture software to record himself giving spoken feedback on his learners' written work. His learners can then download the video of him marking their work, and rewrite it based on his feedback. Here is an example: http://www.teachertrainingvideos.com/luFeedback/index.html

The advantage of this method is that the video can be watched independently of the teacher, and as many times as the learner wants. This allows learners to experience a 'live' audience reading their work, which helps them realise how readers may react to their work, and therefore how carefully and explicitly they need to formulate their ideas for an outsider to be able to follow them. This type of videoed feedback also models the kind of language editing that learners can do themselves before handing in their work.

If you are less digitally minded, you can use this technique live in class using a whiteboard or overhead projector. The only aspect that is lost is the chance for the learner to watch and re-watch independently.

Giving feedback on subject content

If subject content is paramount, the teacher can discuss learners' work as they work. Here is an example (Hedge 2000, p. 300) of a conversation in which the teacher helps the learner work out what they want to say and provides useful concepts and words.

Susanne	My problem here is… I want to say… I want to write about the characters and how they are… how they act …together
Teacher	The way they interact… yes…
Susanne	Interact... yes, that's the plot, isn't it? But also, it's the theme, I think. I'm not sure how I should start…
Teacher	Well, what's the most important thing about the play to you?
Susanne	How he shows the middle class people… they are just super - superficial (Teacher: Yes) … superficial… and they don't care about the working class…
Arianne	(*who is listening in*) The bourgeoisie... they are hypocrites... n'est-ce pas?
Teacher	Yes, we can use the French word… bourgeoisie... Well, why not put that first and then go on to explain how he does this, by presenting a particular family…
Susanne	So, this bit here (*reads*) 'The Birlings are a middle class family...' up to here... yes, I think so... this can follow?
Teacher	Let's look at it (*reads*) 'Priestley shows how they...' you can say 'misuse' here... 'their power.' Yes, that's very clear. You've got a couple of wrong spellings here. I'll underline them quickly and you can look at them later. Don't bother till you've finished…
Susanne	So what about this bit..?

Teacher	What does that say…? I can't read it...
Susanne	(reads) 'Stone... a small stone...'
Teacher	Ah, you mean a pebble… Oh, that's very good, we can talk about throwing a pebble into a pool… it describes it very well.
Susanne	You see... what happens… the story... it's how when thrown a st-pebble? pebble in the water … you get waves going out…
Teacher	Yes, ripples … (*demonstrates*) (Susanne: Yes) ripples spreading
Susanne	So the inspector shows the family how …

Figure 5.8 Feedback on the writing process

The teacher can also react to the information and ideas the learner expresses while ignoring language mistakes. This is possible as long as the language mistakes do not interfere with the message the learner is trying to get across. Here is an example of subject content feedback on an extract from the history assignment of a 15-year-old CLIL learner.

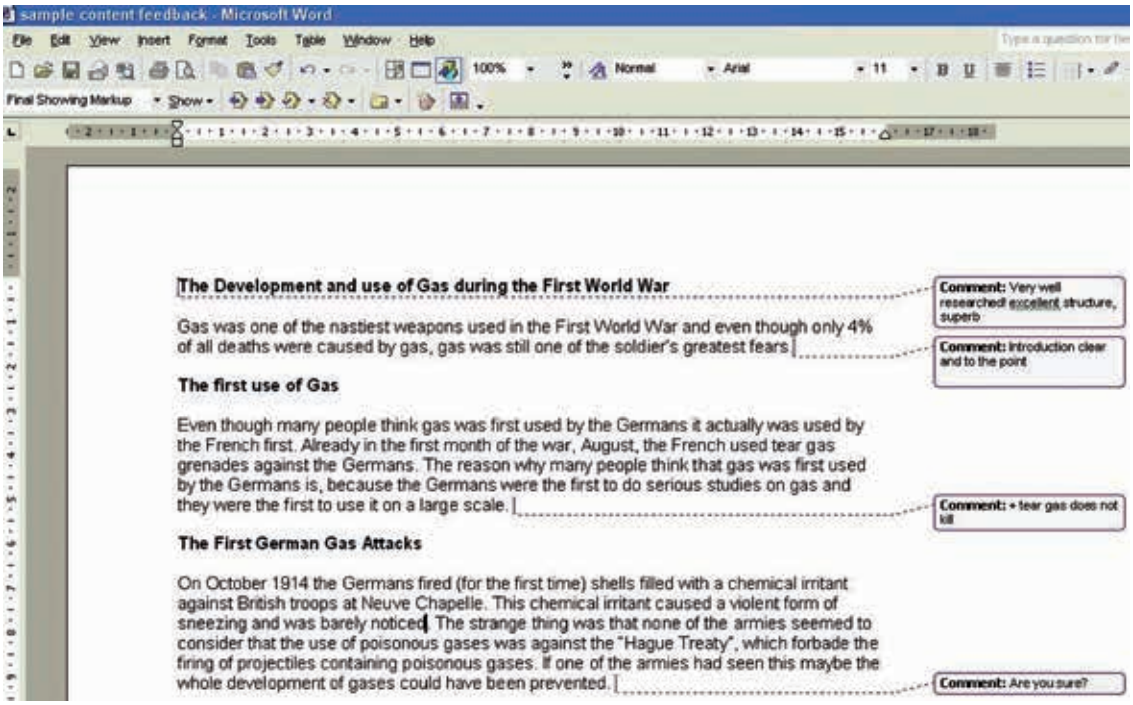


Figure 5.9 Content feedback using comments in Word

This type of feedback can also be given by putting a piece of writing on an overhead projector, digital white board or computer and digital projector. In this way you can draw the whole class's attention to points that you want to give feedback on.

8 GIVING FEEDBACK ON CONTENT AND LANGUAGE

Gibbons (2002, p. 73) suggests a number of questions teachers can ask themselves while they assess a learner's written work. In contrast to the previous suggestions, they take a top-down approach to assessing writing. The questions first relate to the overall meaning and organisation of the writing and its effectiveness. After this, the questions relate to sentence connections, sentence construction, spelling and punctuation. The assumption underlying this approach is that if only spelling is corrected, a learner's writing skills will not improve: learners also need to learn how to organise and structure a text for an audience. Here is

an analysis of the learner's geography text from Example 36 using the questions Gibbons suggests:

General	**Comments on learner's written work**	**Suggestions for language work**
Is the overall meaning clear? Are the main ideas developed? Does the writing reflect the writer's other classroom language experiences (e.g. what they have read or talked about)? What is your overall impression compared to other things the learner has written?	Meaning is clear and all elements of image analysis are present.	
Text Type		
What kind of text is this? Is this appropriate for the writer's purpose? Has the writer written this type of text before?	This is a descriptive text explaining cause and effect. The learner manages to explain cloud structures and their effect, but the text is still clearly that of a learner.	Work on characteristics of texts explaining cause and effect, using authentic examples as models.
Overall organisation		
Is the overall structural organisation appropriate to the text type? Are any stages missing?	The structure is clear, and well organised.	
Cohesion		
Are the ideas linked with the appropriate connectives for this text type? Is there an appropriate variety of these connectives? Are pronouns used correctly (e.g. this and it)? Do pronouns have a clear referent (e.g. is it clear what this refers to)?	The learner uses the connectives *so, this means, and, also, this causes.* She uses *Now I'm going to* and *Now you can see* which is spoken rather than written language. Good use of *this, that it, there.* All pronouns have clear referents.	More variety in connectives of cause and effect. Written links for sequencing. Differences between spoken and written language.

Vocabulary		
Is appropriate vocabulary used? Is there semantic variety (e.g. does the writer use a range of words to describe clouds)?	The learner uses *high, thick, lumpy, swirl, light grey, short, heavy, low, pretty bright, light rain, showers*: plenty of variety, but some L1 interference (e.g. *cares for* from *zorgen voor*).	Literal translation and dictionary work - how to choose synonyms.
Sentence grammar		
Is this accurate (e.g. correct use of tenses, word order)?	Some sentence structure problems.	Work on writing full sentences.
Spelling		
Is this accurate? If the writer does not produce the correct spelling, what is already known about the possible spelling (e.g. different possible ways of spelling vowel sounds or consonants)? What knowledge about the spelling of this word is still lacking?	*Lompy* suggests the learner may not hear the difference between /^/ as in *shut* and /σ/ as in *shot*, in English.	Listening and pronunciation training; ways of spelling different sounds.

Table 5.6 Language analysis

This kind of analysis provides the subject and language teacher with a detailed picture of the learner's strengths and weaknesses in writing for the subject. Based on the analysis, they can plan work to help all their learners write more effective subject texts. Try looking at learners' written work in class using these questions. It will help learners to think about the effect of their texts on an audience, and help them develop the language they need to talk about their writing.

The analysis can be made by language teachers individually or as a department, using several texts, and can be used as input in English classes. Subject teachers can also choose to analyse a typical learner text with a language teacher to develop their own awareness of language used in their subject.

Language teacher can use Gibbons' questions to develop a class profile and prioritise language work. Although this type of analysis is time-consuming, teachers become faster at it the more they use it. There is also a high return on the time you invest, as the analysis feeds into the teaching of both subject content and language.

CONCLUSION

This chapter shows why assessment and feedback are important in CLIL, and how subject teachers can use them to maximise the learning of both subject and language. We have emphasised the importance of assessing and giving feedback on language both for the learning of the subject and for language learning.

To sum up, these are the key points from this chapter:

- Assessing language and giving feedback on language encourages learners to pay attention to language.
- Aligning activities, aims and assessment maximises the teacher's influence on the learning of both content and language.
- Assessing *for* learning helps learners to perform better in both the subject and language.
- Bilingual learners perform better when a range of different types of assessments are used.
- Assessing language can encourage learners to express their content ideas more carefully, which means they absorb the subject matter more thoroughly.
- Assessing language will help learners improve their language use in all subjects.
- Assessing language will allow teachers to monitor their learners' progress in language.
- Assessing language will provide information about the types of difficulties learners are having with language.
- Assessment rubrics can help make subject and language assessment criteria transparent.
- Peer and self assessment can help learners become aware of what is expected of them.
- Providing visual and language support in assessments for learners with limited language can help learners demonstrate what they know, irrespective of their language ability.
- It is useful to correct certain types of spoken and written language mistakes.

There are some key principles for assessing language. When teachers assess language, they can:

- Make the marking criteria explicit.
- Mark selectively related to the language marking criteria.
- Refer to the criteria when they mark, mentioning effective use of language and giving specific advice on what learners need to improve.
- Encourage learners to check their work themselves, using the marking criteria.
- Be consistent with other subject and language teachers within the team, so that parents, pupils and colleagues understand how language is being assessed.
- Give feedback as soon as possible, both while learners are completing assignments in class, and soon after they have finished the assignment.

15 Teacher development: assessing learning and giving feedback

1 List the types of assessment that you use in your subject. Classify them in the Cummins Quadrants. If one quadrant is over-represented, design some new assessments to create more balance in the range of assessments you use.

2 Collect three pieces of written work from your learners at the end of each year (three samples from first-year, three from second-year, and three from third-year learners). Work with a teacher of English to make an overview of the types of language problems learners have in your subject. Use the form in Table 5.6.

3 Record a learner's presentation in your subject and watch or listen to the recording with a teacher of English. Formulate feedback on the learner's subject skills and language skills. Compare and discuss your comments with your colleague, and jointly design assessment criteria for use in future years.

4 Collect three examples of learners' spoken or written work for your subject. Decide with a colleague what type of feedback would be most effective for the learners. See Background and Theory section 6 for inspiration.

PRACTICAL LESSON IDEAS – ASSESSMENT AND FEEDBACK

Practical lesson ideas for assessment

56 NAME AND ASSESS THE CONTENT AND LANGUAGE USED IN ACTIVITIES

Describe and assess speaking and/or writing aims related to assessments in your subject.

When you set an assessment, tell the learners both the subject focus and the language focus of the activity. Explain the language focus for speaking or writing and tell the learners you will assess both the content and how they use language to achieve the speaking or writing task.

Geography: Globalisation
Show learners how the assessment, content and language aims are linked by putting them on the board when you set the assignment:

Assessment	Geography focus	Language focus
How does globalisation affect people at a local level, and what happens if the economic chain is broken? Write a report for a local newspaper, or record a programme for local radio.	Identify effects of globalisation on factory workers and explore the impact of a break in the chain on individuals and the industry.	Write using a report genre, or devise a radio report and tape in groups of two or three.

Variation
Geography: scale and geographical analysis
The activities in this lesson will help you to understand, use and correctly spell words relating to:

- scale, e.g. *catchment area, local, regional, national, international;*
- geographical analysis, e.g. *link, survey, perception, stereotype.*

Speaking and listening - the activities will enable you to:

- ask questions to gain clarification and further information, e.g. *why, how, what, when;*
- answer questions using relevant evidence or reasons.

Writing - the activities will enable you to:

- develop ideas and lines of thinking into continuous writing (250 words minimum).

57 TASK WITH LANGUAGE AND SUBJECT ASSESSMENT CRITERIA.

Assess in a task instead of a test and provide explicit marking criteria for both subject and language.

Use a checklist to design an assessment task, rather than a pen-and-paper or digital test. Include language and subject assessment criteria when you give the checklist to learners.
Checklist:

1 What kind of written or spoken product could I use to assess the content of this topic?
2 What would be an appropriate, English-speaking audience for the product?
3 What content will I assess in the product?
4 What language will I assess in the product?
5 Should the assessment be individual, pair or group work?
6 How will I assess pair or group work?
7 How will I encourage a fair division of work in the group?

Biology: Classification
These answers are based on the poem poster in Example 31.

1 What kind of written or spoken product could I use to assess the content of this topic? *A poster.*
2 Who would be an appropriate, English-speaking audience for the product? *A primary school publisher in England who wants posters for classrooms.*
3 What content will I assess in the product? *Biological classification, main body features, habitat, feeding, reproduction, prey, adaptation to environment, threats.*
4 What language will I assess in the product? *The use of adjectives.*
5 Should the assessment be individual, pair or group work? *Pair work.*
6 How will I assess pair or group work? *By assessing task division.*
7 How will I encourage fair division of work in the group? *By including it in the assessment criteria.*

58 ASSESSMENT QUESTIONS

Learners answer questions about their assessment before submitting it.

Write your assessment criteria in the form of yes/no questions to your learners. Give them the questions at the same time as you give the task so that they think more actively about what they have to do. The questions will vary according to the task you set. Here are some example questions which learners can answer to check they have completed a task properly, based on the geography example below.

1 Is your message clear to the audience? (Does it persuade/argue/complain/narrate effectively?)
2 Does your work give a detailed explanation of...?
3 Does your work cover all of the required points?
4 Have you used an appropriate style for your audience?
5 Does your work suggest...?
6 Are your arguments convincing?
7 Do you give appropriate evidence to support your main points?
8 Is the presentation or layout clear?
9 Is it clear that all the members of the group participated equally?
10 Have you involved the audience by asking questions? Are the questions relevant?
11 Are you able to answer questions about the topic from your audience?
12 Does your work make an effective visual impact on the reader?

Geography: Redevelopment of the rainforest
Assessment task: decision-making exercise

The problem
A large area of land in the Brazilian rainforest is in need of redevelopment. There is, however, disagreement about which method of redevelopment would be most appropriate.

Your role
Your group are representatives of the Kayapo Indians, the Government, or the WWF.

Your task
1 Produce a poster which will **explain** how you think the rainforest should be developed and which will **persuade** the landowners that this is what they should do. *Remember that you have been asked to present the viewpoint of a particular group.*
   In your poster you need to include:
   a an explanation of why the natural forest environment is under threat
   b possible alternative solutions
   c detail about the method which you are suggesting and why this would be the best solution
   d pictures and written information.
2 Make a group presentation explaining your ideas. *Every member of your group is expected to contribute to this presentation*. After you have given your presentation, other pupils will have the opportunity to ask questions. You will be expected to provide answers to these questions.

Assessment criteria in the form of questions
Your work will be assessed according to the following questions:
1 Does the poster make an effective visual impact on the reader?
2 What viewpoint does it take? Is the message clear?
3 Does it give a detailed explanation of why the forest environment is under threat?
4 Does it offer a range of solutions?
5 Do you provide appropriate evidence to persuade the reader or listener that your solution is a good one? Is your argument convincing?
6 Is the presentation clear? Do all members of the group participate?
7 What sort of questions do you ask and how well do you answer the questions asked of your group?

59 RUBRICS

Making assessment criteria transparent.

Preparation
You will need a copy of an assignment or project for your learners on paper and an empty rubric (see Example 32 and 33).

1 Discuss the assignment or project. Work with a colleague or colleagues (subject and language teachers) or learners, to clarify subject and language aims.

2 Brainstorm together to produce a first version of the assessment criteria. Accept all ideas at this stage. For example, here are some brainstormed criteria for a history presentation to a German commandant on how the use of gas in the First World War can be justified:

Possible subject criteria
Clear introduction
Accurate information (dates, events)
Complete information on how gas was used and by whom
Reasons why the use of gas can be justified
Reasons why its use cannot be justified
Clear conclusion
...
Possible language criteria for speaking
Pronunciation, intonation, word stress, grammatical accuracy grammatical range, vocabulary range, use of linking words, fluency, use of language of persuasion, ...
Possible presentation criteria
Attention-grabbing start
Visuals support points
Eye contact
Body language
Audience awareness
Amount of text on PowerPoint slides
...

3 From the brainstorm, select five to eight criteria, so that the rubric fits on one page. Write them in the left-hand column.

4 Write *descriptors* (short descriptions) in the boxes. Start with column 4, the best achievement, and work backwards. Be as specific and positive as possible: write what IS true as far as possible, rather than what is not. A useful technique for writing descriptors is to use the phrases 4. *yes*; 3. *yes*, *but*; 2. *no, but;* 1. *no* while writing each category. For example if the criterion is *species information*:

level 4: *Yes*, species information is complete and correct
level 3: *Yes*, the species information is correct, *but* it is not complete
level 2: *No*, the species information is not all correct, *but* some of it is
level 1: *No*, the species information is not correct at all

5 Share the first draft with other colleagues or another group of learners and ask them to give feedback on its clarity. You could also try assessing some assignments with it, if available. Discuss how clear and useful the criteria are.

6 Revise and improve the rubric. Make any changes you feel are necessary based on the feedback and your own experiences in the try-out.

60 HIGH OR LOW DEMANDS

Using Cummins' Quadrants to balance cognitive and contextual demands.

Design an assessment which would fit into each of Cummin's quadrants. Use this to design assessments which vary the cognitive and contextual demands you make on learners across the years.

Geography: Development of a waterfall
Quadrant 1
Label
Provide diagrams of the two stages in the development of a waterfall, with a list of terms.
Ask learners to draw an arrow from each term to the correct place on the diagram.
Quadrant 2
Reproduce information from a text
Give learners a text on waterfalls and ask them to write down their answers to written questions on the text.
Quadrant 3
Transform and personalise
Ask learners to draw a diagram and explain the two stages in the development of a waterfall for a tourist brochure for a well-known waterfall.
Quadrant 4
Argue a case using evidence
Ask learners to write an article for a local newspaper, arguing against placing a pipeline in a waterfall.

61 RELAY RACE LABELLING

Assessing kinaesthetically.

Make four large, clear drawings of a picture you would like your pupils to label. You will also need 4 marker pens. Pin the drawings to the wall on the other side of the room. Make four teams. Teams stand at one end of the room; the drawings are at the other end. Teams have a pile of word cards (the labels for the picture). They send one member of the team at a time to label the drawing; learners are only allowed to complete one label at a time. Teams receive points for the number for labels they accurately place in a fixed amount of time. This can count towards their final grade at the end of term.

Physical education: Parts of the body
Use a picture of the human body and ask learners to label the different parts. Picture and labels can be found on www.enchantedlearning.com/subjects/anatomy/body/label/

62 INNER / OUTER CIRCLE

Sit in two circles and answer questions about a topic.

Create two parallel circles of equal numbers of learners (e.g. five in the inner circle and five in the outer circle), facing each other.
Tell the learners they are going to have a test. They will revise together, and then take the test individually. Tell them the topic of the assessment. Show a question on the topic, which they discuss with the learner opposite them. Then say: *outer circle move one person/two people to the left*, so that they are then facing a new partner. Call out a second question which they discuss with their new partner. Call out: *inner circle move two people to the left*, and call out your third question.
After all the questions have been asked and discussed, give the learners the questions in writing and allow them to write down their answers. Grade as a test.

Biology: Photosynthesis
On a digital white board project ask questions about photosynthesis (to be found at www.bbc.co.uk/apps/ifl/scotland/education/bitesize/higher/biology/cell_biology/quizengine?quiz=photosynthesis) and reveal one question at a time, allowing the learners to discuss their answers.

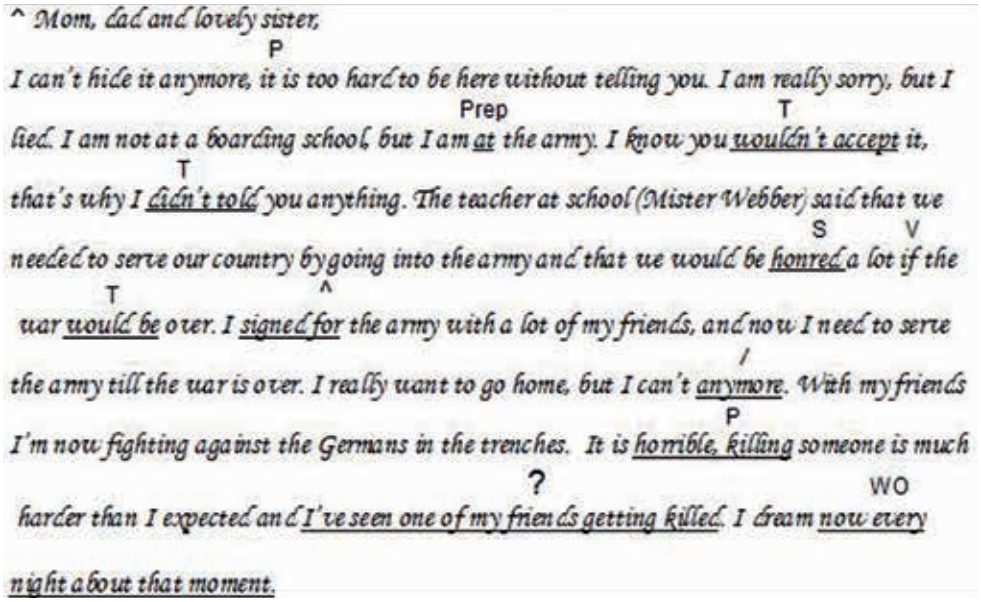
63 CORRECTION CODE

Give feedback selectively.

Use a correction code to give feedback on learners' language.

History: First World War

Learners have written a letter from a soldier in the trenches to his family at home



^ Mom, dad and lovely sister,

P

I can't hide it anymore, it is too hard to be here without telling you. I am really sorry, but I

Prep T

lied. I am not at a boarding school, but I am at the army. I know you wouldn't accept it,

T

that's why I didn't told you anything. The teacher at school (Mister Webber) said that we

S V

needed to serve our country by going into the army and that we would be honred a lot if the

T ^

war would be over. I signed for the army with a lot of my friends, and now I need to serve

/

the army till the war is over. I really want to go home, but I can't anymore. With my friends

P

I'm now fighting against the Germans in the trenches. It is horrible, killing someone is much

? WO

harder than I expected and I've seen one of my friends getting killed. I dream now every

night about that moment.

Here is a key to the correction code

Symbol	Meaning	Symbol	Meaning
T	Tense or time	Exp	Rewrite this, to improve the expression
S	Try spelling this again	WO	Word order
P	Correct the punctuation	WF	Wrong form (e.g. told instead of tell)
V	Vocabulary: find a different word for this	/	Split word up
Prep	Change the preposition	☺	Well-written section: apt and clear
^	Put in the missing word		

Variation

There are many different possible correction codes. Here is an example of the most common codes used for correcting English. The most effective code is one which is designed and then used by all the teachers and learners together.

Code	Meaning	Example
WW	Wrong word	The **revelation** started in 1879
WT	Wrong tense	The revolution **has started** in 1879
WO	Wrong order	The revolution **in 1879** started
Sp	Spelling	The rev**a**lution started in 1879
P	Punctuation	The **R**evolution started in 1879
X	Extra word	The revolution started in **the** 1879
?	Meaning not clear	The revolution which started was 1879
M	Missing word	The revolution started 1879
S	Style	The revolution **kicked off** in 1879

64 COMMON MISTAKES

Identify and correct common mistakes.

Draw up a list of mistakes that learners often make in their writing or speaking for your subject. Put them in a table, and ask learners to identify the type of mistake and then correct it.

History: The French Revolution Common mistakes	Type of mistake	Correct sentence
The revelation started in 1789.		
The revolution has started in 1789.		
The revolution in 1789 started.		
The revalution started in 1789.		
The Revolution started in 1789.		
The revolution started in the 1789.		
The revolution which started was 1789.		
The revolution started 1789.		
The revolution kicked off in 1789.		

65 CARD GAME WITH TYPICAL MISTAKES

Learners play a card game correcting typical mistakes.

Draw up a list of mistakes that learners make during a series of lessons for your subject. Create cards. Form groups of four. Stack the cards in the middle of the table. Learners take turns to turn over a card. They read the sentence aloud and decide if it is correct or not. If the sentence is correctly identified as a correct sentence, they may keep the card. If the sentence is not correct, the learners say what is wrong with it and how it should be corrected. If their correction is accurate, they keep the card; if not, it is returned to the pile. The winner is the learner with the most cards when all the cards in the pile have been turned over.

Any subject: Conversation
Below you find some examples of sentences that you can put on the cards:

I was together with a friend. His mother she was the head of volunteers. She's good in English. I've been working on school. I didn't knew that. Is it possible that I get some tea?	We're with the four of us. On the havo that's impossible. What do you like of this school? I live here about four years. I do my shoppings. He's doing it enthusiastic.

66 FALSE FRIENDS

Recognising false friends.

Some words seem similar in Dutch and English but mean different things. These are called **false friends**. Collect examples of these in your subject, and compare and highlight their use in English and Dutch with a table.

Chemistry: boiling points

	EN	NL	
Water *consequently boils at 100 degrees centigrade.		Consequent	
Rain fall decreases; consequently, there are water shortages.		Dus	
	EN	NL	
Water **consequently* boils at 100 degrees centigrade.	Water **consistently** boils at 100 degrees centigrade	Consequent	*Water kookt **consequent** bij 100 graden.*
Rain fall decreases; consequently, there are water shortages.	Consequently	Dus	*Regenval vermindert, **dus** komt er water-tekort.*

67 RECORD LEARNERS PERFORMING A SPEAKING ASSESSMENT

Giving feedback on spoken language.

Make a recording of learners performing a speaking assessment. Use the recording for feedback on spoken language or for peer or self assessment.

History: Roleplay on Elizabeth I
Record the roleplay and ask learners to give feedback on different aspects of spoken English using a feedback sheet. In the feedback sheet, they should note down good points and points of development in different areas (vocabulary, pronunciation, grammar).

68 LET'S TALK

Giving feedback on writing during writing.

Talk to the learners as they write, and discuss what they are trying to explain.

English: Describe the character interaction in J.B. Priestley's 'The Go-Between'
See the discussion between Susanne and her teacher in Background and Theory section 7.

69 NAME CARDS

Note language mistakes on name cards and hand these out individually after an assignment.

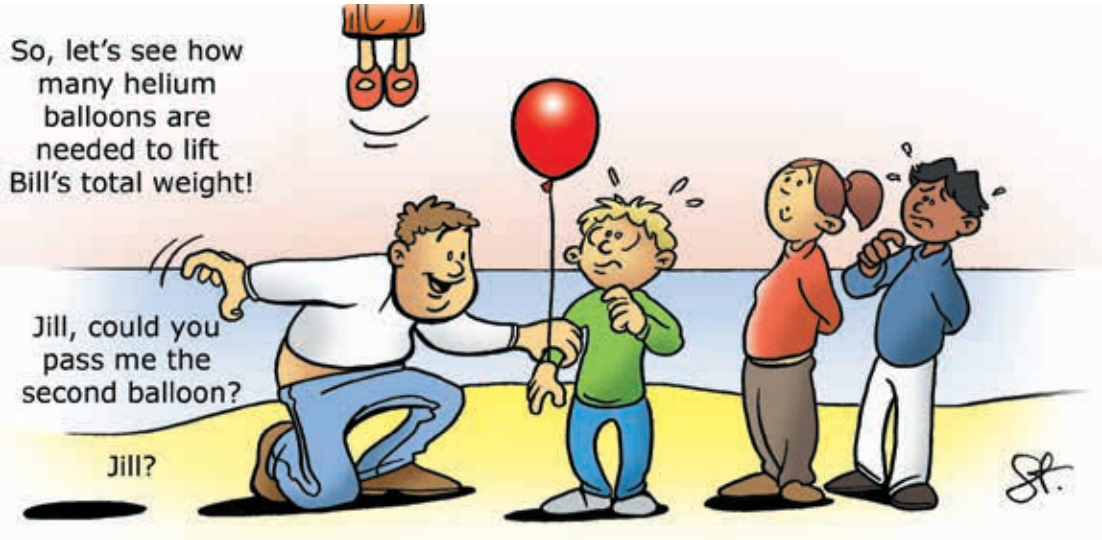
Produce a name card for each learner, like this:

Name:
Good use of language:
Language mistakes:
Corrections:

As learners carry out an activity, note their mistakes on the card. At the end of the lesson, hand out the cards and ask the learners to correct the mistakes and return the card at the start of the next lesson.


6

6 Using projects for CLIL



This chapter covers:

- CLIL *projects* and their advantages and disadvantages for learners and teachers;
- characteristics of good CLIL projects;
- cross-curricular and integrated projects;
- grouping learners for CLIL projects;
- CLIL project aims and design;
- the learners' and teachers' roles in CLIL projects;
- *WebQuests* for CLIL;
- practical ideas for CLIL project work.

INTRODUCTION

Working on projects can be an extremely rewarding experience for bilingual learners and their teachers. A well-designed project can achieve a greater learning impact than, for example, chronologically working through tasks in a course book. Learners often blossom during project work and put more effort into project lessons. They often work together and retain more of what they are learning because they discuss and recycle and are creative with information. Moreover, projects are also rewarding for teachers: they can work together on creating materials and evaluating final products or *performances* and are often pleasantly surprised by the quality of learner work produced during projects.

A project is a multi-skill activity for learners which focuses on one theme or topic; it supports learners in carrying out one or more performances or pieces of work. Projects are usually collaborative, but can also be done individually. Good projects help learners demonstrate the learning that they have already done and at the same time, push them a few steps further. A project can be intensive, lasting for a few lessons, or it can be more extended, taking up one or two hours a week for several weeks.

This chapter looks at the advantages of using projects and lists the characteristics of good CLIL projects and WebQuests (Internet projects). It also discusses some issues related to groups and projects. The information is illustrated with some examples of practical CLIL projects. The practical lesson ideas support teachers in designing and working with CLIL projects.

Below is a description of a geography and English project called *Expedition through the Sahara*. The project was carried out after the learners had done some work on deserts.

16 Giving feedback on a project

Imagine you are one of the teacher's colleagues and that she has invited feedback about her proposed project. She is planning to hand out the document in Example 37 to her third-year classes. Read the project description and write down your answers to these questions:

- What do you like about this project for use in a CLIL setting?
- How will the teacher's CLIL learners benefit from this project?
- What improvements might you suggest to make the project more useful for CLIL?

CASE STUDY

This project introduces several aspects of working with projects that are covered in this chapter.

> "This project, *Expedition through the Sahara*, forces learners to sort through an overwhelming amount of information on the Internet and choose the information that is appropriate. As the demands are specific, they are forced to change this information into their own words and design. The learners work in pairs on this project and all classroom time is scheduled in the computer room."

Content aims

At the end of the project, learners can:

- describe the characteristics of deserts which affect travel there;
- suggest ways of surviving dangerous situations in the desert;
- draw a map showing a clear route;
- understand food webs in desert climates;
- understand and describe the way of life of the Tuaregs (nomads who live in the Sahara);
- illustrate the brochure appropriately.

Language aims

At the end of the project, learners can:

- write an informative brochure for members of a desert expedition;
- organise text into a clear brochure;
- write using appropriate tenses (particularly the future tenses);
- scan information to take notes on the dangers involved.

37 Instructions for a project on the Sahara

Internet project: Expedition through the Sahara

You are going to lead an expedition across the Sahara. You must research the area in which you will be travelling, map out your route, plan your expedition and then write a brochure. Your brochure must include the following items:

- a title and an attractive title page;
- an introduction about where the expedition is going;
- a map with the route clearly outlined (be careful to avoid conflict zones);
- a paragraph about the things you might expect to see and do on the trip, including information about the landscape, cultural sites and people you might meet;
- a list of all of the things you will need to take and why you might need them;
- a risk assessment chart which discusses the hazards you might face. The chart should look like this:

Hazard	Ways to avoid hazard

- a simple food web that includes at least ten plants and animals from the Sahara (be careful not to choose animals from other deserts that do not live in the Sahara, such as kangaroos);
- a short diary entry (approx. 250 words) describing a visit with the Tuareg people. This visit would have occurred on a previous expedition;
- a conclusion about how you are looking forward to the trip and to meeting the new members of your group.

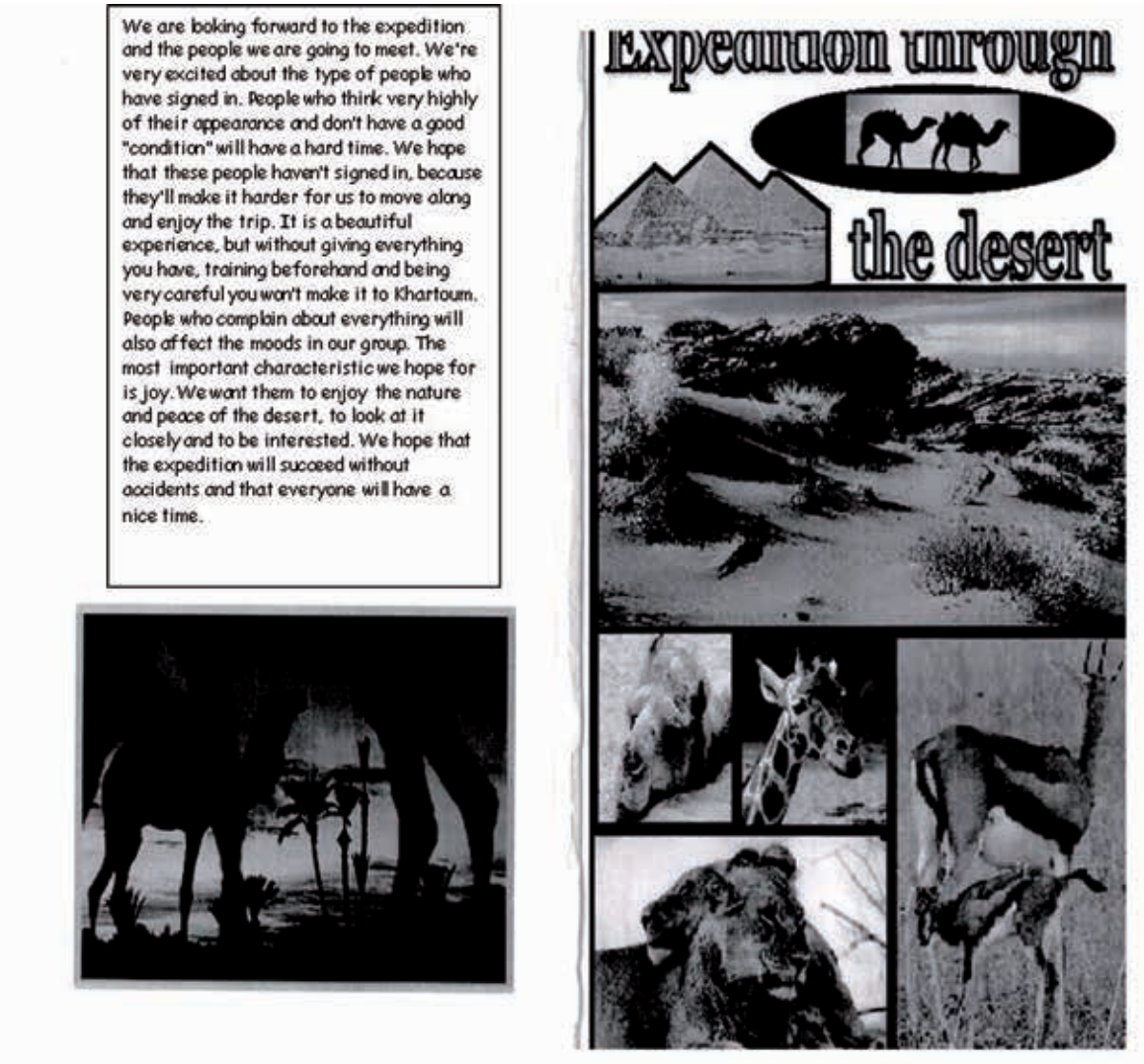


Figure 6.1 Some pages from a Sahara brochure made by learners

WHY IS THIS CLIL?

This project is a good example of a CLIL project, since learners are working on a subject (the desert) and language skills (writing a brochure) at the same time. The topic in general is appealing and motivating. It is quite clear what the teacher expects of the learners in terms of a final product. There is an interesting variety of tasks - a map, descriptive written work, a chart, a food web, a more personal writing task - so that the work that the learners produce will show their understanding of the topic in a variety of ways. The instructions are clear and short. The project is also quite challenging: requires the learners to synthesise information from a variety of sources.

The project is a good example of (transformation) scaffolding, since the learners are required to sift through a great deal of information on the Internet and change it into a new form. This means there is little chance that the learners will only cut and paste information. The project is a culmination of work around the topic of deserts, and thus recycles and adds to information the learners have already come across in the lessons. The tasks are clear, which helps the learners to focus while searching. Finally, the learners are given a considerable amount of freedom and choice in the project; for example, they will need to decide on their route, how far they will travel and for how long, as well as work with design issues for their brochure. The element of choice allows them to display their talents.

17 Issues with projects in CLIL

CLIL teachers who work with projects have said the following about them:

"Our English department is always very willing to help when we do projects and often initiates them. Our art teacher often has a good, creative idea, and then she asks other colleagues to join in."

"Working in groups can be problematic. One group finishes way ahead of time and then hangs around distracting the others. Plus there's always one group that doesn't work together or doesn't hand in anything. Why bother?"

"Projects are so time-consuming, both to create and to execute. For that reason only, we don't do much project work."

"Geography and history have a cross-curricular project, but it doesn't involve the English department, unfortunately."

"Working on our geography and English project is one of the most satisfying aspects of my year. I have a good relationship with the geography teacher, the learners really like doing the project and come up with some fantastic products. We are going to do it again next year."

"The children make lovely products, but sometimes they only cut and paste from the Internet to make their projects. Projects don't really seem to add to their learning."

Based on your own experience, which quote do you agree and disagree most with? Imagine that you are discussing these quotes with your colleagues, which arguments would you use to motivate your choice?

BACKGROUND AND THEORY

1 CLIL PROJECTS

CLIL schools carry out different types of projects. In CLIL, projects almost always involve two subjects, since the final products are written in English. Some schools carry out international projects, either face-to-face or online. Others work with individual projects for the International Baccalaureate *Middle Years Programme* (MYP) or the *International Baccalaureate* extended essay. Teachers working on MYP projects can copy and use a document on www.richmond.k12.va.us/ib_jefferson/MYPPersonalProject.htm. This document helps your learners think through their own ideas about individual projects. CLIL schools may also require learners to write their *profielwerkstuk* in English.

In cross-curricular projects, teachers of two or more different subjects choose a project topic and formulate aims together. These aims can be related to learning, language, content and thinking skills that are useful for the topic. An example of a cross-curricular project is one involving science, religious studies and English in which learners work towards having a debate on different aspects of stem cell research.

In some projects, learners carry out work in different subject lessons for the duration of the project: for example, two hours of English and two hours of geography related to a project on Aboriginals. Some schools organise complete cross-curricular project weeks, where a large project replaces the normal timetable and covers many aspects of the same topic but from different subject angles. Other schools do international projects, where learners work together with other English-speaking learners or visitors on a topic either face-to-face on an exchange programme or online.

A CLIL project is all of the above, but it includes a balanced language and subject focus. Since English is always involved, a CLIL project is by nature cross-curricular. Learners work on aspects of one or more subjects as well as on an aspect of English, and they are assessed on their work in terms of both subject and language. The case study in this chapter is a good example of an integrated CLIL project: learners are working on their geography knowledge and skills as well as on their English skills when writing a brochure.

2 TYPES OF PROJECTS

Haines (1989) divides projects into four useful categories:

Information and research projects

Information and research projects involve studying or comparing a particular aspect of a topic. For example, learners carry out research into the effects of global warming, comparing two different countries (geography, language work on comparatives).

Survey projects

In survey projects, learners create surveys, questionnaires or interview questions and then gather information about people's opinions on a topic. An example would be an interview about energy use in the home (physics, language describing the home, comparisons and statistics).

Production projects

In production projects, learners create or design an authentic or semi-authentic product. For example: an interview in which a famous interviewer, such as Oprah Winfrey, interviews a historical character, such as William of Orange (history, language for making questions).

Performance and organisational projects

In performance and organisational projects, learners organise an actual experience for others, for example a real mediaeval feast for a group of parents (history, language of cooking).

3 ADVANTAGES OF CLIL PROJECTS FOR BILINGUAL LEARNERS

There are several good reasons for working on CLIL projects with your learners.

Engagement, motivation and creativity

Project work is a refreshing break from the normal routine; it allows them to be creative with what they are learning. It is often a way to engage learners, to increase their motivation in their learning process and to

support them in taking control of their own learning. Creative work can help learners to relax and consequently, to work more fluently and take more risks with their language skills.

Transfer
One of the most important arguments for using projects in CLIL is that learners learn to transfer the information they have learned by applying it in another context or to a different subject.

> **Example of transfer**
> Learners learn about classification in biology, then work on a visual poster representing an animal and write a poem about it, thus changing their knowledge about classification to a new form.

Thinking skills
Projects can develop a number of thinking skills simultaneously and in context. Projects often present complex problem-solving activities. This requires learners to work with language at many different levels: to think, to explain, and to reflect on their learning. All this results in deeper and more effective content and language learning. Chapters 3 and 5 contain more information about thinking skills.

> **Example of thinking skills**
> Learners gather information about an economic issue (e.g. the credit crunch) and hold a debate, representing different countries' experiences or points-of-view.

Language skills and output
Projects help learners develop language and produce a lot of output (see Chapter 4). In a CLIL project, learners work on content and English at the same time, thus interweaving them. Learners also work on different language skills (reading, listening, watching, speaking and writing) over a period of time. Projects provide realistic contexts in which learners can apply their existing language skills as well as develop new ones.

Interaction in English during project work can encourage second language acquisition: when interacting, learners need to use English creatively and fluently. According to the *Multi-feature hypothesis* (Westhoff, 2004), the more a learner is involved in a task, the more mental actions are involved and the more learning will occur. As learners interact, they become aware of what they still need to learn as they speak and write, and thus try to improve their spoken and written work.

Projects also allow learners to recycle language they already know as well as discover, create and experiment with new language. In other words, learners produce output. Projects often encourage writing: through creating different kinds of written products, learners learn to work on different authentic text types and to write informally and formally for different audiences.

> **Example of language skills**
> Learners prepare a television debate about global warming. As preparation, they practise giving and asking for opinions by designing a questionnaire for classmates about their opinions on music, thus rehearsing the language needed for the final debate.

Reading strategies (see Chapter 3), such as guessing the meaning of unknown words from context or scanning texts to see if they contain useful information, are developed during project work and can be transferred and practised in any subject.

Finally, learners work on both accuracy and fluency during project work. During peer-to-peer discussions about the project, learners work on their fluency. Accuracy skills in language are developed as they design and polish their final product.

Skills integration

Subject skills and language skills have the potential to be doubly integrated in projects; they can be integrated both within the subject and across the curriculum. For example, if learners have learned to assess the reliability of sources for history and use linking words to narrate a series of events, these are language and subject skills which can be practised again in a different context.

Example of skills integration

Learners have learned during biology lessons to discuss the reliability of sources when discussing, for example, evolution. They have also learned linking words needed to describe processes. Reliability of sources is also a subject skill in history, where different issues are highlighted. A cross-curricular project on the history and theory of evolution could highlight these differences, and at the same time encourage the transfer of language and subject skills.

Transferable skills

Projects can encourage the development of a number of skills other than language or subject-related skills. Learners who are weaker in language can show their understanding and skills of a subject in non-linguistic ways (also see Chapter 4). Some of these skills include designing, illustrating, organising (of people, materials, tasks, and time) and using equipment (camera, computer, or DVD recorder). Thus, bilingual learners can demonstrate their knowledge in non-linguistic ways, so that weaknesses in language do not interfere with their progress in the subject.

Example of a project involving other skills

Learners make a sketch or film about a famous scientist such as Marie Curie or Gregor Mendel, and dramatise an important scientific discovery, developing organisational skills along the way.

Authentic assessment

Projects can be a form of continuous assessment and allow learners who perform less well in a testing situation to be assessed, arguably in a fairer way, on a wider variety of skills. More information on this aspect of projects can be found in Chapter 5.

Co-operation

Most projects are carried out in pairs or groups, and encourage and develop co-operative skills. A well-designed project encourages all learners to be actively engaged and involved, and promotes positive interdependence. For more information on creating projects which involve all learners, see Applications in CLIL.

Example of co-operation
In a project on Aboriginal Dreamtime stories, learners research information from different sources, and then put their individual work together to produce a final poster presentation.

Learner differences
Projects enable learners of different abilities, skills and multiple intelligences to work together, using their talents and qualities (see Activity 74). This shows all learners how useful the different types of intelligence can be and encourages them to value and develop a variety of types of intelligence.

Example taking learner differences into account
In a project on life in the trenches in the First World War in Europe, learners are given the choice of presenting their knowledge in different forms: a pen and ink sketch showing the details of a trench, a letter from the trenches, a rap about living in the trenches, or a conversation between two soldiers in a trench.

Independence
Projects encourage and provide practice for independence and autonomy, since the learners are responsible for planning, decision-making and division of work. For example, learners can choose a topic or sub-topic within a theme or choose from a variety of end products. In a Dutch context, projects prepare learners for working on the *profielwerkstuk*. In an international context, projects prepare learners for their individual personal project in the Middle Years Programme or the International Baccalaureate extended essay.

Example encouraging choice and autonomy
In a project on hip hop music, learners choose whether to write a song, make a film or write a biography.

Connection with the real world
Projects can bring real-world situations into the classroom and involve fieldwork or work in the community. Using language in a real-life context makes more realistic language demands on CLIL learners. Moreover, if they have practiced producing language during a project, learners are more likely to be able to produce it themselves in real-life situations.

Example of connection with the real world
A biology project on water involves collecting water samples from different sources.

4 ADVANTAGES OF CLIL PROJECTS FOR TEACHERS

Projects have a number of advantages for teachers as well. First, good projects are durable and can be used for several years in succession. The Internet offers a great many ready-made projects: try www.scienceacross.org for the sciences. WebQuests are available for all subjects – Applications in CLIL section 9 for more information. Projects enable teachers to develop themselves: working together, talking about teaching and learning in project settings helps teachers focus on their aims. During project work,

teachers can come into more personal, close contact with learners, coaching them through the different stages of their work. They become more aware of each individual's qualities, contributions and level of English, as well as of the areas in which they still need support. This is good for CLIL: both language teachers and subject teachers gain insights into what the learners need to learn to perform well.

5 DISADVANTAGES OF CLIL PROJECTS

Projects have their disadvantages, too. Designing and working with projects can be time-consuming and requires careful planning and co-ordination within the school. Some teachers refuse to co-operate on projects, and some learners need a great deal of structure and lose track of things if a project is not well-designed: it is advisable to start with a small-scale project for classes not used to this type of work.

Some groups work faster than others. Design extra, more challenging activities for fast-finishing groups, or encourage them to choose more difficult end products. Some learners may take a 'free ride' in their group, letting others to do all the work. Plagiarism can be a problem, especially in the form of copying and pasting from uncredited Internet sources. To avoid this, projects should be designed so that learners need to transform information from one source into another product. For more on this issue, see Applications in CLIL

APPLICATIONS IN CLIL

1 CHARACTERISTICS OF GOOD CROSS-CURRICULAR CLIL PROJECTS

CLIL projects work on both language and subject. A good CLIL project:

- balances subject and language demands and expectations;
- gives the learners a clear overall subject and language aim;
- appeals to learners and motivates them;
- challenges faster learners and supports weaker learners;
- tells the learners clearly what skills and understanding they will gain during the project;
- takes the learners into the real world and brings the real world to the learner;
- clearly connects the subjects involved to each other;
- involves teachers equally;
- has a variety of clear final products;
- provides models and examples;
- explains who the realistic audience is for the final products and so gives a reason for writing or speaking in English;
- puts co-operative learning into practice;
- includes crystal-clear instructions;
- shows the learners how they are to be assessed on subject, language and process, for example in the form of a rubric;
- includes a number of realistic, lifelike subject and language activities which relate and lead clearly to the overall aim;
- gives the learners some measure of choice, in terms of topic, way of working, or final product or performance;
- can be completed in the allocated time;
- provides coaching and/or feedback to the learners when needed;
- helps learners to practise transferable skills.

2 FORMULATING PROJECT AIMS

One of the first steps of project design, right after deciding on a topic, is to formulate the aims.
Try to express them in both statements and questions; this helps you formulate aims in terms learners can understand. These are examples of a few overall aims for single-subject projects.

Example projects aims for content	Example project aims for language
Geography Learners will understand public opinion concerning local shops and businesses on a shopping street. (Why do people shop in the high street?) Learners will appreciate how population distribution and growth affects society. (How does the size and growth of a population affect how we live?)	Geography Learners know how to design a questionnaire and write up the results of a survey. Learners can comment on graphs and explain arguments.
Art, craft and design Learners will understand what is meant by *Dreamtime* and its importance for Aboriginal people. (What is *Dreamtime* and what does it mean for the Aboriginal people?)	Art, craft and design Learners can describe Aboriginal art work, stories and the Australian landscape both verbally and in writing.
Biology Learners will understand how gene mutations cause disease. (How do some genes make us ill?) Learners will understand the effects of eating fast food. (How does eating fast food affect people's lives?) Learners will appreciate why a healthy *Happy Meal* is necessary. (How can we design and present a healthy *Happy Meal*?)	Biology Learners can describe the effects of gene mutations verbally or in a PowerPoint presentation. Learners can use the language of cause and effect. Learners can present the characteristics of a happy meal verbally and in writing.
Physics Learners will understand how embryonic stem cell research might affect society. (How does stem cell research into embryos affect our lives?)	Physics Learners can formulate arguments related to a controversial topic.
Maths Learners will understand how to measure phenomena, such as water flow, the height of buildings and the width of rivers. (How can I measure how fast a river flows or how high a building is?)	Maths Learners can explain data, facts and figures.

Table 6.1 Example project aims for content and language

3 PROJECT DESIGN

A number of conditions need to be met before you can start a project. For example, if the project is cross-curricular, there must be a logical link between the subjects, and all teachers should be equally involved. Teachers need to have sufficient time and energy to develop and carry out the project and its evaluation. Finally, the school needs to be flexible in timetabling to enable teachers and learners to carry out the project.

There are many aspects to consider when designing good cross-curricular projects.
Teachers can use these questions to discuss and design a CLIL project:

The learning

- How can you interest and motivate the learners?
- What do you want the learners to learn during the project? What are the overall, general learning aims (for both language and subject)? What are more specific learning goals (per subject)? What do the learners need to understand at the end of the project?
- What new knowledge or skills do learners learn or practise during the project?
- How does each activity within the project contribute to the whole project?
- How is the project connected with the outside world?
- What is/are the final product(s) and how are these related to the overall project aims?

The learners

- What choices do you offer learners (in terms of topic, groups, planning and performances)?
- How are the learners divided into groups or pairs (by learning styles/multiple intelligences, preferences for friends, faster and slower learners together or not)? Who decides on group division?
- How is the work divided fairly and equally between the learners?
- How do you ensure that each learner does his or her work?
- How do you cater for fast finishers or slower groups?

Organisation

- Who is co-ordinating the project?
- Which subjects and teachers are involved?
- Which and how many learners are involved?
- How can you organise time to prepare, complete and assess the project? Which materials do you need?
- How is ICT involved?
- Which classrooms need to be booked?
- Is fieldwork involved? If so, who is doing the fieldwork, when and where?
- Who introduces the project to the learners?
- Who is in charge of each class or group of learners?
- When are learners assessed?
- How can you ensure deadlines are kept? What are the consequences if learners miss deadlines?

Coaching - the process

- Who coaches the learners during the project and when?
- What sort of feedback do learners get during the project? Is it feedback on English or on the subjects? Is the feedback in English and is it given orally, in written form, or both?

English

- How are the learners helped to learn English in the project? Why do learners really need to use English in this project?
- Which good English models of final products can you provide?
- What feedback do you give to learners on their English both during and after the project?
- What language support can the English teacher give to learners to help them write and/or speak fluently and accurately during the project?
- What language support can the English teacher give to the teachers in all stages of the project?

Presentation of final products or performances

- How are the final products presented?
- When are the deadlines for the final products?
- To whom are the final products presented (teachers, learners, parents, management...)?

Assessment and feedback

- What are the assessment criteria for the final products?
- How is the process and/or group work assessed?
- Is there a balanced focus on both content and language?
- What sort of feedback will learners get on their final products: oral, written, a mark?
- What is the status of the marks?
- Is there an individual or a group mark, or both?
- Who assesses: the teacher, the learners, or both?

Evaluation

- Which aspects of the project will be evaluated?
- Who evaluates?
- How can you learn from the evaluation for future projects?

38 Fit is cool

The *Fit is cool* project is a one-day cross-curricular project to raise awareness of the importance of exercise and diet, which involves the teachers of English, physics, physical education, biology and maths, and all the learners in year 1.

Here are some examples of activities the learners carried out per subject:
Biology: note down everything you eat for a whole day and calculate the calories you took in.
Maths: calculate your body mass index (BMI).
Physical education: carry out different tests to measure how fit you are; for example, measure your heart rate and blood pressure, and how supple you are.
English: write a report on the conclusions about your fitness, including some resolutions about exercise and/or diet, and an action plan for the future.

4 THE LEARNER'S ROLE IN PROJECTS: GROUPING LEARNERS

There is a big difference between letting learners work in groups and structuring group work so that learners really have to work together. There is also a difference between giving a group a task and structuring a task so that everyone plays an equal part. To ensure good learner co-operation and a fair division of work, you need to think about the roles learners will play in the project and the tasks they will each undertake. The clearer and fairer the roles and tasks for each learner and the group as a whole during the project, the more rewarding the co-operation.

Badly-functioning groups can be disastrous during project work, so it is worth taking some time to consider fair and effective groupings for learners. The groups in which learners work during project work are vitally important for both teachers and the learners themselves. The main objective is to divide the class into an optimal number of different learners.

As a general rule, groups of two to four members work best: they are easy to organise, each member can contribute a reasonable amount of work, and decision-making is efficient. With a group of four, there is less chance that the group will split up into smaller groups than with a group of five or more.

There is no right way to divide a class into groups, but here are some aspects to consider. Some ways of dividing classes into groups are more time-consuming, and therefore only relevant for longer projects.

- **Random selection:** Assign learners a number and put them together according to these, in arbitrary groups. This is easy to organise and breaks up friendship groups. However, learners often feel that they have no choice, and groups may turn out to be incompatible.
- **Self-selection:** Let learners choose the groups themselves. This is easy to administer, and learners like to choose their own group members. Some research has also shown that friendship groups perform better. There are also disadvantages: some learners might feel left out, and this way of dividing up the class can result in some groups not functioning well at all.
- **Partial self-selection:** Allow learners to state their preferences. Before the project starts, discuss the issue of group formation, for example by asking questions: *What makes a good group? Why do some groups work well whereas others do not? What are the advantages and disadvantages of being in a group of friends?* (also see examples under Practical Lesson Ideas). After the discussion, learners write down three classmates with whom they would prefer to work, as well as three classmates with whom they would rather not work. Try to take these preferences into consideration when dividing the class into groups. This way, both teachers and learners have a say in the process.
- **Learning styles:** Group the learners according to learning styles (or multiple intelligences). Before the project, the learners do a test to discover their own learning styles profiles (see practical project idea 6.9.5). Groups are formed according to the test results. Grouping according to similar learning styles or intelligences is a good idea if groups can choose a final product together. It ensures there is a variety of strengths in a group, so that all learners can use their particular talents to contribute to the final product.
- **Group appointment:** Decide on grouping according to your own criteria, such as behaviour, marks, level of English, learning style and gender. Learners usually feel that this is a fair way of dividing groups. A disadvantage is that the learners do not have a say: this does not encourage learner autonomy.
- **Task appointment:** Divide groups according to their preference for the final product. If the learners are allowed to choose between different final products, the groups can be divided according to their wishes. This is motivating for learners, since they are working in a group towards the product they have chosen, and also encourages learner autonomy. However, there is one disadvantage: too many learners may want to create the same final product. In such cases, ask the learners for a second and third choice.

5 CO-OPERATIVE LEARNING: SPIRE

Marzano (2000) and Johnson & Johnson (2009) mention five conditions which stimulate co-operation in groups and which can also be applied to project design. They are: simultaneous interaction, positive interdependence, individual accountability, reflection and equal participation: we use the acronym SPIRE. When designing projects, teachers can use these conditions to plan and check the activities that learners do to ensure more collaboration and participation. Below is a brief definition of each of these conditions, illustrated with a project on stem cell research.

SPIRE		
	Condition for co-operative learning	**Example project: an informative brochure on stem cell research for patients with non-curable diseases**
S	*Simultaneous interaction* Each learner works on their part of the project at the same time.	Learners can work at the same time collecting information about different aspects of stem cell research, related to their own role (see below).
P	*Positive interdependence* Learners sink or swim, succeed or fail together. Each learner has a different task to carry out, and each task contributes to the completion of the final product. For example, this may relate to four different sub-topics in the research subject; the ideas from each of the four members are thus needed for and contribute to the final product. The roles can also be process roles, such as timekeeper, recorder, designer, chairperson, and monitor of English.	After some class work on the stem cell research controversy, the class is divided into groups. The four learners in each group each receive a role on a card. In role, they gather arguments for or against stem cell research. The roles are: 1 Janie, aged 24 and just diagnosed with Parkinson's disease; 2 Margaret, a pro-stem cell researcher about to gain fame through her research; 3 Robert, aged 56 with multiple sclerosis, totally against the use of embryos but for the use of adult stem cells; 4 Joe, a pro-life American politician. Using the results of their research, the group then formulate a list of ethical claims for and against stem cell research as preparation for their brochure. To create the brochure, each learner is given (or chooses) one of the following roles: designer, illustrator, writer or language expert.
I	*Individual and group accountability* All the group members are responsible and do their fair share of the work during the project, which contributes to the group effort. The role each learner has played must be clear.	Learners each use a timesheet to keep a record of what they have done during a lesson, or for homework. Cognitive organisers related to each of the four roles above are provided to structure work. These are handed in with the brochure. In this way, the teacher can assess how much effort learners are putting in and provide feedback as the project progresses.

R	*Reflection* Learners think and talk about how the group is functioning and how this can improve.	Halfway through the project and at the end, the teacher provides some questions for discussing group co-operation (or lack of it). The conclusions are included in the final product. For an example, see practical project ideas 6.9.8 and 6.9.9.
E	*Equal participation* Learners contribute the same amount of work to the project.	The four tasks mentioned above are equally challenging to learners. Some work is done individually and gathered together at a later stage; for some parts of the brochure it is necessary that they are discussed by the group as a whole (introduction, conclusion, overall structure).

Table 6.2 Conditions for co-operative learning: SPIRES

6 TEACHER'S ROLE AT THE START OF A PROJECT

The teacher plays a variety of roles during different project phases.

Project stage	**Teacher's roles**
Start of project	Organiser, information provider, motivator
During project	Coach, facilitator, mediator, record keeper
End of project	Assessor, evaluator

Table 6.3 The teacher's different roles in projects

At the beginning of a project, teachers are project organisers. They plan the work, give instructions and divide the class into groups. They discuss the subject and language aims of the project as well as the expected final product, and they share or develop the assessment criteria with the class. Teachers can also provide materials and resources, or explain where the learners can find these themselves. During the introductory lesson, teachers can design motivating activities to interest learners and 'draw them in' to the topic. Also at this stage, teachers provide a project timetable to show learners what is expected of them at the different stages of the project.

39 Project timetable for project on gene mutations and disease

Project: Gene mutations and disease	
Date	**What is expected of me?**
Tue 13 March	*Orientation*: Read through the assignment at least twice; form a group; select a disease and discuss your presentation form; start looking for information to answer the questions; give each other tasks.
Mon 19 March	*Getting to work*: Find as much information as you can about your disease and select what is relevant; finish answering the questions; start preparing the presentation.
Tue 20 March	*Finalisation*: Decide who is to do what during the presentation; organise any materials (e.g. ping-pong balls, coloured wool) or equipment you may need (data projector, OHP). The science assistant can help.
Mon 26 March	Three presentations (max. 15 min per group, including questions)
Tues 27 March	Three presentations (max. 15 min per group, including questions)
Tues 3 April	Three presentations (max. 15 min per group, including questions)
N.B. Use this as a guide only, don't forget that I expect you to spend time on the project outside the lesson as well.	

7 TEACHER'S ROLE DURING A PROJECT

As the project progresses, teachers gradually take on more of an observing, coaching and facilitating role. At this stage, they provide ideas and help learners find resources and materials relevant to their project. They are also mediators, helping to solve group conflicts and disagreements. It is advisable to keep a record of how each group is progressing. Alternatively, learners can complete a timesheet or project diary themselves. The timesheet can be included as a final product and be used for assessment or evaluation purposes.

Teachers also need to keep in contact with each group, so that they can give feedback and keep each group on track. They can make a plan or timetable for coaching each group, or groups can approach teachers when needed. Each group should be coached and monitored several times during the project. The more feedback learners receive as they work, both on the subject and on language, the more refined and complete their final products will be.

8 TEACHER'S ROLE AT THE END OF A PROJECT

At the final stages of a project, teachers ensure that groups are nearing completion of their final products, and that the displays or presentations are being organised. They can remind groups of the assessment criteria, or organise peer or self-assessment of completed products. The teacher's role now becomes that of assessor of the final product of the project.

40 Cross-curricular CLIL project: overview, planning, aims

This is an adapted example of a successful first-year cross-curricular CLIL project on Aboriginal Australia and Dreamtime stories.

Overview

This project lasted five weeks and consisted of a number of lessons (five to six 45-minute periods of English and four periods of art and design per week), an excursion to the Aboriginal Art Museum in Utrecht, the production of a poster of a Dreamtime story related to a modern-day story, a piece of art including an 'artistic statement' and an exhibition. This exhibition was held during a parents' meeting for bilingual learners, which also coincided with a ceremony in which learners received language certificates.

Planning

Week	English	Art and design
1	• Introduction to the project; *KWL grid* (What I know, want to know and learned; see Activity 10). • Scenes from the film *Ten Canoes*. • Pointing out the importance of storytelling as a means of passing on beliefs and values. • Discussing the Aboriginal way of life as it used to be.	• Introduction to Australian Art. Slide show of traditional Aboriginal art. Dreamtime pictures were painted with ochre on cave walls, bark shelters or in the sands and on bodies. Important to show cultural diversity. • Key words introduced: *figurative, ochre/natural pigment, bird's eye view, x-ray style, cross hatching, geometric designs, dotting* and *symbolism*.
2	Visit to Aboriginal Art Museum in Utrecht, including an introduction by a museum guide and an interactive element involving speaking English.	
2	Learners listen to and read Dreamtime stories online. In groups learners start working on their own Dreamtime story and poster.	Learners start work on their individual piece of art using ochre colours.
3	Further work on Dreamtime story and poster.	Work on piece of Aboriginal art.
	Group presentation of the Dreamtime story and poster in class and re-visit to the KWL chart (do you remember what you wanted to know?).	
4	Learners write artistic statements to accompany their individual work of art.	
5	Exhibition for parents at parents' meeting and certificate ceremony.	

Project aims

Content aims	English language aims
• understand what is meant by Dreamtime; • understand the importance of Dreamtime for Aboriginal people; • understand the influence of the natural environment to Aboriginal people and their relationship to it; • understand the current position of Aboriginal people as a minority in Australian society; • recognise the cultural diversity of Australian indigenous peoples; • design a creative poster.	• use a variety of English vocabulary to describe Aboriginal art work, Aboriginal stories and the Australian landscape; • understand Dreamtime stories through listening and reading; • summarise a story; • orally present information about a Dreamtime story; • write a coherent 21st century Dreamtime story.

Below is the teachers' handout for the English lesson in Week 1 of the project.

41 Cross-curricular CLIL project: handout KWL chart for teachers' use

Aims

- Learners think about their own prior knowledge of indigenous culture in Australia/Aboriginal People.
- The learners can complete a KWL (Know, Want, Learn) chart.

Materials

- Sets of cards of Australian animals (3 kangaroos, 3 platypus, 3 wombats, etc.). Write role descriptions on the back of each card;
- KWL chart (large sheet of paper);
- Tape.

Procedure

1 Before the lesson, make enough sets of three Australian animal cards. On the back of one card in each set, write one of the following three roles and tasks:
The **leader** gathers materials, keeps the group on task and makes sure everyone agrees.
The **reporter** tells the class at the end of the task what the group has decided for each part of the KWL.
The **recorder** writes down what the group decides for each part of the KWL organiser.

2 Tape a big KWL chart to the board (you will need to use it again later). Explain how and why we use it (graphic organiser), and present an example: "Today I am going to introduce you to a strategy that can help us to visually organise what we already know, what we want to know, and what we are going to learn. This strategy is called the KWL".

3 The learners provide one or two more examples for each section of the KWL. Add them to the chart, as guided practice. Once learners understand the chart, put them into groups of three.

4 The learners pick an Australian animal card and those with the same card make up a group. They then work together on their ideas for the KWL.

5 In plenary, the reporters from each group share their KWL charts; the teacher adds information to the large chart on the board.

6 Summarise what is on the KWL chart. Then explain that next lesson the group will start learning some things about Aboriginal people and their culture and hopefully start to fill in the 'What we learned about Aboriginal people' section of the chart.

KWL Chart: Australian Indigenous people

K **What we know**	**W** **What we want to find out**	**L** **What we learned**
Categories you can think about: country, way of life, history, beliefs, environment		

42 Cross-curricular CLIL project: learners' handout Art and Design

This is the learners' handout for the Art and Design lessons (Week 2, 3, 4) of the project.

First-year Art and Design project
Aboriginal Art

Background

Subject: Aboriginal artwork.

You are going to make your own Aboriginal painting using your own symbols. The painting shows a story or event which is important either to you personally or to your culture. In your English lessons, you will write an artistic statement explaining your story.

Materials

- sketchbook, for your symbols and sketches;
- piece of cardboard of 20 x 20cm;
- 2HB pencil;
- poster paint: yellow, yellow ochre, red, burnt sienna, ultramarine, black and white.

Procedure

Work alone. Think of a story or event which is important to you as a person or as a member of your family, or a story that is important in your own culture.

Take a good look at the Aboriginal symbols on your handouts; most of the symbols are simplified shapes. Start simplifying shapes from your own world that are important to you and to the story you are going to draw. Make sketches in your sketchbook. Simplify them until you have at least FIVE symbols of your own. Add them to your handout. Make a sketch of your story, using your own symbols.


Emu track/Spear


Rainbow/Cloud


Possum track

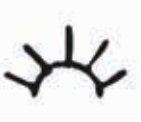

Rain


Star/Sun


Waterhole/Campsite


Fire/Smoke/Water


Kangaroo track


Human track


Man/Woman

(Symbols from http://www.aboriginalartonline.com/culture/symbols.php).

If your teacher approves of your sketch, transfer it onto your piece of cardboard. Paint your sketch by using the Aboriginal dotting technique. You can achieve this by keeping your paintbrush upright. Make sure you use enough paint.

Use unmixed colours and make sure one colour is dry before painting another colour next to it. The whole piece of cardboard should be covered.

Artistic statement

Write an artistic statement about your work. Describe the story painted and explain why it is important to you or your culture. This will be the text that accompanies the painting on the exhibition for parents. You will work on the statement during the English lessons.

43 Cross-curricular CLIL project: learners' handout English

Aboriginal Dreamtime and its Stories

Introduction

In your group you are going to listen to a particular Dreamtime story on the Internet told by an Aboriginal person. All these stories will tell you something about Aboriginal culture and the Aboriginal way of thinking about the world.

From an early age, storytelling plays a vital role in educating children. These stories help to explain how the land came to be shaped and inhabited; how to behave and why; where to find certain foods, etc.

Gathered around the camp fire in the evening, on an expedition to a favourite waterhole, or at a landmark of special significance, parents, elders or aunts and uncles use the stories as the first part of a child's education.

As children grow into young adults, more of the history and culture is revealed. Adults then take responsibility for passing on the stories to the following generations. In this way, the Dreamtime stories have been handed down over thousands of years.

Task

Create a poster presentation in a group around your Dreamtime story. The best poster will be shown at the Aboriginal Art exhibition for parents on June 8th. The class as a whole will vote for the best poster.

Instructions (groups of four)

1 Go to http://australianmuseum.net.au/Stories-of-the-Dreaming. Read and listen to a story together and make sure you understand it. The teacher will tell you which story to listen to.

2 Divide the roles and tasks (see below). The experts find information related to their own field and fill in a handout. Then everybody shares their information with the rest of the group. If you find information which is interesting for another role, give it to the group member with that role.

Roles and tasks

Storyteller. Prepare to retell the story and explain what Aboriginal children can learn from it. What is its meaning?

Aboriginal way of life expert. What tools do the people in the story use? Find out about the way Aboriginal people lived and other tools they used.

Animal expert. Research which animals appear in your story and what they symbolise.

Geographical expert. Look for information about the location of your story. Where is it set, what are the important landscape features, and what is the climate like?

3 When you have carried out your research, share the information as a group as preparation for your poster design. You have to provide information about the following points:
Storyteller. Story title and summary of the story
Animal expert: Information about animals that appear in the story
Geographical expert: Kind of landscape and climate of the part of Australia the story is from
Aboriginal way of life expert: Aboriginal way of life and tools used in the story

4 Design the poster together: plan where the information and pictures should go. When you are ready, show your plan to your teacher.

5 Create your poster together, including interesting texts and pictures. Your poster should show the story and its meaning. The **storyteller** prepares the talk to accompany the poster.

6 Present your poster to class (10 minutes).

44 Cross-curricular CLIL project: painting and artistic statement

This painting and artistic statement were made by a pupil at Herman Wesselink College, Amstelveen.

Artistic statement

This painting is about my younger years. The time that I fell off my bicycle (and hurt myself). Some parts don't really fit in the painting I made. But that's because it would be a very empty painting if I didn't put all the other stuff in.

9 WEBQUESTS

WebQuests were originally created by the American Bernie Dodge and the Australian Tom March in 1995. According to Dodge, a WebQuest is "an inquiry-oriented lesson format in which most or all the information that learners work with comes from the web" (Dodge, 2001). March (2003) defines WebQuests in a slightly more academic and perhaps more accurate way:

"A WebQuest is a scaffolded learning structure that uses links to essential resources on the World Wide Web and an authentic task to motivate learners' investigation of a central, open-ended question, development of individual expertise and participation in a final group process that attempts to transform newly acquired information into a more sophisticated understanding. The best WebQuests do this in a way that inspires learners to see richer thematic relationships, facilitate a contribution to the real world of learning and reflect on their own meta-cognitive processes."

In other words, WebQuests are ready-made, Internet-based projects, which require learners to think about, synthesise and transform information on the web to design their own products or performances. There are WebQuests for all age groups.

WebQuest elements

A WebQuest usually contains seven main elements:

- an introductory paragraph which motivates learners and sets the stage;
- a task;
- a description of the steps needed to complete the task;
- resources which learners can use to complete the task and which may include worksheets, websites or handouts to support learning;
- a rubric or other list of assessment criteria to assess the final product;
- a conclusion, rounding the WebQuest off and encouraging learners to take the topic further;
- eacher instructions on how to work with the WebQuest.

10 WHY WEBQUESTS FOR CLIL?

Since most WebQuests are in English, they are a good source of ready-made project material for CLIL. WebQuests save time: a teacher somewhere else in the world has designed and tried out the WebQuest. Moreover, they provide authentic written and spoken input in English. They "provide learners with exposure to authentic material, meaningful content and possibilities for real communication in the target language" (Stoks, 2002). Furthermore, good WebQuests are meaningful learning activities: they involve problem-solving (Pérez Torres, 2007) and provide lots of opportunities for spontaneous speaking and communicative writing in English. Finally, WebQuests can provide interesting cultural input.

Characteristics of WebQuests for CLIL

A WebQuest written entirely in English does not necessarily make a good CLIL WebQuest. A good CLIL WebQuest helps learners with their subject skills, knowledge and thinking, as well as with their language development.

How can you evaluate a WebQuest for CLIL? Some characteristics of good CLIL WebQuests are listed below. These criteria are based on the rubric that Dodge (2009) designed to evaluate WebQuests and the evaluation instrument to evaluate Language Quests (*Meetlat talenquests*, published on Kennisnet). They can be used to assess whether a WebQuest is appropriate for your CLIL learners.

Characteristics of good CLIL WebQuests		
Subject elements	**Other elements**	**Language elements**
• The introduction motivates and attracts the learner. • The WebQuest builds on the learner's prior knowledge about the topic. • The WebQuest is linked to the subject curriculum. • The task is much more than cutting and pasting information. It is engaging and motivating and requires learners to use thinking skills, transforming or synthesising the information in the WebQuest into new products. • The resources provided help with the accomplishment of the task. • The resources are varied and meaningful. • The rubric (evaluation) includes clear criteria for assessing the content of the finished product.	• The task in the WebQuest is a task which might be carried out in real life: it is authentic. • The WebQuest exposes learners to different cultures or cultural issues. • The visuals are appropriate and support the topic. • It is easy to navigate through the WebQuests (all the links work). • The organisation of the WebQuest is clear to learners. • The steps in the process are clear. • Learners have clear and distinct roles and responsibilities. • The evaluation criteria are clear and in the form of a rubric. • The rubric includes clear criteria for assessing the process, individual and group work.	• There is a variety of language materials and texts. • Learners work on a number of language skills (listening, reading, speaking and/or writing). • The WebQuest is linked to the language curriculum and states language aims. • The language material (input) is at the correct level, neither too simple nor too difficult. • The WebQuest includes tasks or task elements to help learners become aware of both the language in the texts and the language they need to produce. • Tasks lead to language output in spoken and/or written communication. • The tasks include tasks which help learners to learn new language skills and improve existing skills. • The language input supports the learners in improving their language. • The learners have a reason to communicate in order to complete the task. • Doing the WebQuest involves interaction - real communication - in English. • The tasks help learners with language learning strategies, such as predicting, guessing or organising text. • The tasks help learners to become aware of producing language for a particular audience. • The rubric includes clear criteria for evaluating the language element of the finished product.

Table 6.4 Characteristics of good WebQuests

Table 6.5 shows specific examples of language help (or scaffolding) in actual WebQuests.

Examples of language help in WebQuests		
Subject(s)	Topic and task	Language help (scaffolding)
Geography	Aboriginals Write a letter to the Australian government including your opinion about apologising to the Aboriginal people	Information about how to write a formal letter; reminder about the standards relating to language (e.g. awareness of audience, purpose and grammar).
Geography	Aboriginals Oral report (PowerPoint presentation)	Rubric including language aspects such as use of voice, conciseness of language and awareness of audience.
Music	Hip Hop Write a rap or make a clip defending hip hop as an art form	Guidelines on how to write persuasively; graphic organiser about different elements of poetry (e.g. alliteration, enjambment and assonance); models of good raps.
Maths	Logical thinking Solve a mystery using logic and reasoning	Input on deductive and inductive arguments; article on constructing a logical argument; information on "if... then" sentences.
Maths/ economics	Small businesses Go through the initial steps for starting a small business	Model business plan.
Science	Genetic disorders Gather information about genetic disorders	Graphic organiser to focus note- taking.
Chemistry	Careers in chemistry Argue for a career in chemistry	Online pages to help with persuasive arguments.

Table 6.5 Examples of language help in WebQuests

CONCLUSION

Working with projects can help learners to work together, to be creative, and to acquire skills and knowledge relating to both subject and language in a realistic and natural way.

To sum up, here are some points to keep in mind when working with projects in CLIL:

- Start small. Do a project which lasts a few lessons first, then try a longer one. Work initially with one colleague rather than the whole team.
- A WebQuest is a ready-made project in English which another teacher has had so much success with that he or she decided to take the time to write it up and publish it. It may be a good idea to start with a WebQuest.
- Work with colleagues you enjoy working with. Give each other clear feedback on how things are going.
- When designing a project, give the learners some choices; they will appreciate this!
- Design projects in such a way that learners learn something new and are challenged.
- Design projects where learners have to 'transform' information from one form into another to prevent plagiarism.
- Think carefully about groups: who will work with whom and why? Be explicit to your class about how they will be grouped.
- Plan a project well in advance, so you can enthuse colleagues, learners, timetable-planners and parents. Plan it at a time when learners are often at school and not on trips.
- Inform other colleagues about your project; they may want to join in next time or do related work in their lessons.
- Plan coaching time into your project; the learners will produce better results if you take time to coach them on content and language.
- Create a clear one-page rubric which includes both language and content assessment criteria. Provide the learners with this rubric before the start of the project.

18 Teacher development: using projects for CLIL

1 Open the website on WebQuests (http://webquest.org). Click on 'find WebQuests' to search for appropriate WebQuests for your subject. You can refine your search to the appropriate age group (grades 6-8 in the United States are lower secondary school in the Netherlands, 9-12 are upper secondary school).

2 Look through the chapter for inspiration and jot down ideas for a project in your subject. Alternatively, do this with a colleague. Brainstorm possible angles and ideas together.

3 Consider a project which you have carried out. How could you improve it using the advice in this chapter? Use the checklists from Applications in CLIL section 3.

PRACTICAL LESSON IDEAS – USING PROJECTS FOR CLIL

70 BRAINSTORMING FOR PROJECTS

A graphic organiser to help teachers to brainstorm ideas for projects.

Brainstorming with colleagues can be a first step to project design and can provide inspiration for interesting projects. First choose a topic together, then brainstorm possible ideas for your own and colleagues' subjects individually. Here are some topics which might inspire you.

Addiction Africa (or another continent) Alternative energy Biotechnology Blood and water Disaster The 18th century Electronics	Food and nutrition Germany (or another country) Global warming The Holocaust The human body Life stages: birth, death and rebirth The Olympic Games	Paris (or another city) Photography Robots Starting a business Survival The weather World religions World wars

After the brainstorm, share ideas and examine links between these ideas to narrow them down to one or two related themes or topics. Then search for combinations which will allow plenty of CLIL opportunities and transfer between the subjects.

All subjects: water

Below you can find an example of a brainstorm session for ideas for a project on the topic of water, with suggested topics for nine different school subjects.

Music:

- Classical music related to water (e.g. Handel's *Water Music* and Ravel's *Jeux d'eau*)
- Composing music related to water
- Making water-related musical instruments (e.g. bottles and jars of water)
- Pop songs about water

Economics:

- Economic development related to water: seas, rivers, deserts and jungles
- Global warming and carbon trading
- World Wildlife Fund
- Decline and recovery related to water

Chemistry:

- The chemistry of H_2O
- Electricity and water
- pH levels
- Water chemistry, e.g. aquarium water, swimming pool water

Physics:

- Steam engines
- Waves
- Water towers
- Water heaters
- Water slides and the laws of physics

Geography:

- Flooding and drought
- How water forms our planet
- Collecting and recycling water
- Rainfall worldwide
- Rivers and oceans

English:

- Poetry related to water, e.g. 'Not waving but drowning' (Stevie Smith)
- Novels or films related to flooding, drought or the sea, e.g. *Life of Pi* (Yann Martel), *On Chesil Beach* (Ian McEwan), *Jaws, Titanic*.

Art and design:

- Artists depicting water
- Photographs: reflections in water
- The Impressionists
- Liquid sculptures
- Water symbols in art
- Water colours

History:

- Water mills and the Industrial Revolution
- The Great Fire of London and its effects on water management
- Roman water systems

Biology:

- Water creatures and plants
- The human body in relation to water (dehydration, diving, hypothermia)
- Coral reefs

Variation

An alternative way of thinking about projects is to start with the syllabus of one or both subjects. Find similar topics and seek relationships between both curricula and go from there.

71 DESIGNING A CLIL PROJECT

Structuring ideas with colleagues for a CLIL project.

Once you have thought of a topic for a cross-curricular CLIL project, use the table below (Blythe, 1998) to work with colleagues to expand on your initial ideas.

Project title: _____

What is the topic of our CLIL project?	What are the overall goals for our CLIL project? "Learners will understand..."
What are the specific content aims for our CLIL project? "At the end of this project, learners can..."	What are the specific language aims for our CLIL project? "At the end of this project, learners can..."
What questions (about content and language) can our learners answer at the end of the project?	What final products can our learners create to demonstrate that they understand both the topic and use the language?
What kind of continual assessment can we use to keep learners on track? What type of feedback will learners get on both language and content during the project to further their learning?	How can we assess our learners' learning? What are our assessment criteria (per subject and for English) for the project? Who is assessing what?

72 PROJECT CHECKLIST

Use the checklist with your colleagues while designing a project.

This checklist can be used to design a new project or to evaluate an existing one. Read Background and Theory and Applications in CLIL to refresh your ideas about project design and use the checklist to ensure you haven't forgotten anything.

Have you thought about...?

The learning

- ☐ Overall aims?
- ☐ Language and subject aims?
- ☐ How the parts of the project link together and link to the real world?
- ☐ The final product or products?

The learners

- ☐ Learners' contributions?
- ☐ Giving them choices?
- ☐ Group and work division?
- ☐ Dealing with diversity: learning styles, fast finishers, language level, slower groups?

Organisation

- [ ] Co-ordination?
- [ ] Planning for teachers and learners?
- [ ] Materials, rooms, fieldwork, computers or other media?
- [ ] Deadlines for learners and consequences?

Coaching - the process

- [ ] Who coaches whom and when and about what (subject and/or language)?
- [ ] Type of feedback?
- [ ] Spoken or written feedback, or both?

English

- [ ] Why do learners really need to use English in this project?
- [ ] Can we find good product models in English as input?
- [ ] Input and feedback on English both during the project and at the end?
- [ ] Language support for teachers and learners?

Presentation of final products

- [ ] How are the final products presented?
- [ ] Who is the audience?

Assessment and feedback

- [ ] Assessment criteria for final product and group process?
- [ ] Kind of feedback for learners: oral, written, a mark?
- [ ] Marking?
- [ ] Who assesses?

Evaluation

- [ ] How?
- [ ] When?
- [ ] Who?

73 FORMING GROUPS

Dividing your class into groups.

This is an activity for dividing your class into groups that takes into account the learners' preferences but which produces groups in a fair way. It is worth taking time to divide the class into groups carefully, since group organisation influences the results of the project.

1 Explain to your class that they are going to do some project work in a few weeks' time and that you would like to divide them into groups fairly. Discuss aspects of groupings with them, such as:

- Who would you like to work with and why?
- Who do you work well with (not just friends)?
- How do you choose who to work with?
- Who has skills or qualities which you don't have?
- What skills or qualities do you have to offer?
- When does a group work well and why?
- When does a group fail to work well and why?
- What do you think about boys and girls in the same group?

2 Ask each learner to complete a card like this one:

My name: _____

Three people I would like to work with on a project

1 _____

2 _____

3 _____

Three people I would definitely NOT like to work with on a project:

1 _____

2 _____

3 _____

3 When you have all the information from the class, you can use it to make groups. If you like, make a table like the one below.

☺ means that a learner has a preference to work with this learner.
☹ means that a learner does not want to work with the other learner.

Here, Adri likes working with Bas, Christa and Ernst, but not with Beata, David or Jane. Aim to put the learners who like working together in the same group, but if this is not possible, spread the less popular learners between the groups.

Preferences	Adri	Bas	Beata	Christa	David	Ernst	Felicity	Jane	Roos
Adri		☺	☹	☺	☹	☺		☹	
Bas									
Beata	☺				☹	☹		☺	☹
Christa									
David									
Ernst		☺	☺						
Felicity									
Jane									
Roos									

This website helps you create a sociogram online: http://www.sometics.nl/.

74 FORMING GROUPS ACCORDING TO MULTIPLE INTELLIGENCE PROFILES

Discover learners' multiple intelligence (MI) profiles.

This is an activity first published in a different form in Mulder & Tanner (1998). Let your learners read the information about multiple intelligence and complete the questionnaire. Ask them to provide you with their top three intelligences. Use the results to divide up the groups according to similar or different intelligence groups.

Information

We are all intelligent - in at least eight different ways. Which are your strong intelligences?
An American professor, Howard Gardner, has discovered that we have at least eight different kinds of intelligences: linguistic, logical-mathematical, bodily-physical, visual-spatial, musical, naturalistic, interpersonal and intrapersonal. Here is a brief description of each intelligence.

Linguistic: Verbal. You like working with words, reading and writing.

Logical-mathematical: You like concepts, think logically and like puzzles and problems.

Bodily-physical: You enjoy sports and games. You like to move around and learn by doing. You use body language to communicate.

Visual-spatial: You think in images or pictures, learn by seeing and by using charts or diagrams.

Musical: You enjoy learning and/or making music. You have a sense of rhythm and melody.

Naturalistic: You enjoy the natural world, animals and are interested in the environment.

Interpersonal: Social. You like working in groups, and learn well if you study or discuss things with other people.

Intrapersonal: You understand your own feelings and thoughts. You like to daydream and fantasise and to work alone. You like to know why you are doing something.

Instructions

Score each of the 40 statements below like this:

4 always true for me
3 often true for me
2 sometimes true for me
1 very occasionally true for me
0 never true for me

MULTIPLE INTELLIGENCE TEST

1	English, social studies and history are easier for me at school than maths and science.	1
2	I am aware of the weather.	2
3	Friends come to me for advice.	3
4	I am good at chess, draughts and other strategy games.	4
5	I see words in my head.	5
6	I can imagine how something might look from above, like a bird would.	6
7	I can tell when a music note is out of tune.	7
8	I sometimes walk down the street with a tune playing in my head.	8
9	I consider myself a leader (or others think I am a leader).	9
10	I would rather spend my evenings at a lively party than having a quiet talk to someone.	10
11	I enjoy word games like Scrabble, anagrams, crosswords and tongue twisters.	11
12	I like analysing, calculating and measuring things.	12
13	I find it difficult to sit still for long periods of time: I need to move around.	13
14	I use a camera or video recorder.	14
15	I love animals and think about working with them.	15
16	I have a good sense of direction.	16
17	I enjoy biology lessons and learning about the natural world.	17
18	I have a very close friend.	18
19	I like learning about my own personality.	19
20	I keep a personal diary where I write down my thoughts.	20
21	I like working with my hands, e.g. model-building, sewing, weaving, carving, or woodwork.	21
22	I make tapping sounds or sing little melodies when I work or study.	22
23	I am interested in 'green' issues related to the environment.	23
24	I have music on in the background when I study.	24
25	I need to DO things with a new skill rather than simply reading about it or seeing a video that describes it.	25
26	I often see pictures when I close my eyes and I often have vivid dreams at night.	26
27	I prefer looking at reading material with pictures.	27
28	I regularly spend time alone to think about important life questions.	28
29	I see myself as a loner (or others see me as a loner).	29
30	I sometimes have good ideas when doing physical activities.	30
31	I like planning, e.g. my school work or a party.	31
32	I am interested in how (mechanical) things work, e.g. a clock, a computer or a CD player.	32
33	I would describe myself as physically well-co-ordinated.	33
34	I like watching nature programmes on television.	34
35	I would prefer to spend a weekend in a house in the woods than at a busy place with lots of people and action.	35

36	I've written something that I am proud of or that others enjoyed reading.	36
37	If I hear a song or piece of music once or twice, I can sing it accurately.	37
38	Maths and/or science are some of my favourite subjects at school.	38
39	When I drive down a road, I pay more attention to words written on signs than to the scenery.	39
40	When I've got a problem, I look for someone to share it with rather than try to work it out on my own.	40

Scoring

Multiple intelligence questionnaire: add up your scores

	A	B	C	D	E	F	G	H
	1	4	13	6	7	2	3	19
	5	12	21	14	8	15	9	20
	11	31	25	16	22	17	10	28
	36	32	30	26	24	23	40	29
	39	38	33	27	37	34	35	18
TOTALS	A	B	C	D	E	F	G	H

TOTAL

A Linguistic (Ling) _____

B Logical-mathematical (LM) _____

C Bodily-physical (BP) _____

D Visual-spatial (VS) _____

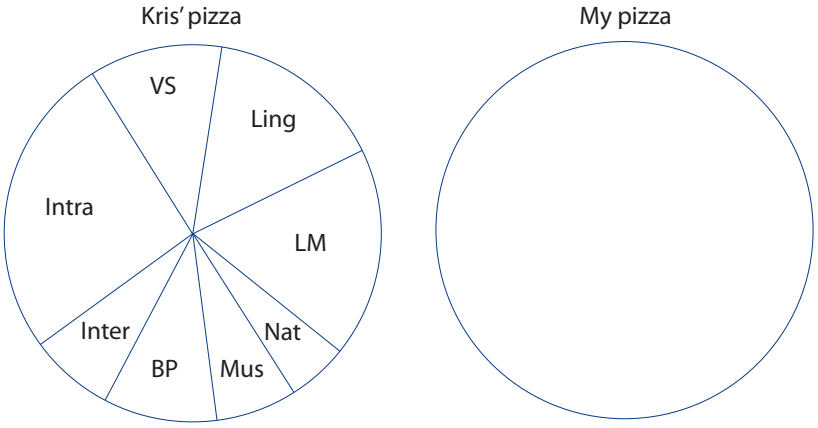
E Musical (Mus) _____

F Naturalistic (Nat) _____

G Interpersonal (Inter) _____

H Intrapersonal (Intra) _____

We are all a mixture of all intelligences. You now have scores which make up a profile of your own (stronger and weaker) eight intelligences. On the left is an MI 'pizza' made by a third-year learner, completed according to her scores. Fill in the right-hand pizza to show how your scores are divided.



75 GROUP CONTRACT

Groups plan their own work together to keep to their goals.

Once you have divided your learners into groups, ask them to discuss and complete the group contract below. The groups sign this contract at the start of a project to agree on who will be doing what. You may want to obtain a copy, so that during the project you can coach the learners on work done.

Group contract

Group members:

1 _____
2 _____
3 _____
4 _____

Our project is: _____

Our final product is: _____

We would like to share our final product on (date) _____ and it will take _____ minutes.

We are going to finish our work on (date) _____.

This is what each member is going to do during the project (each member should have different work to do!).

Name	Action
1	
2	
3	
4	

Group signatures: 1_____ 2 _____ 3 _____ 4 _____

76 GROUP SELF-EVALUATION SHEET

Complete a self-evaluation sheet during a project.

Provide one self-evaluation sheet per lesson per learner. Explain that each learner needs to keep an individual record of how group work goes during each project lesson. They do this by completing a copy of this handout each time and keeping it in their file. You can use the handouts to coach the learners as they go along, too.

Self-evaluation sheet

Name _____ Date _____

Who worked the hardest in your group this lesson? Or did you all contribute equally?	
What did you do well in this lesson?	
What were you not so pleased about this lesson? What do you want to do better next lesson?	
Have you divided the tasks between you to prepare for next lesson? Who is doing what?	
Are you on schedule with the planning? If not, why not?	
Make an estimate of the time you personally spent on the project outside the lesson (between this and the previous lesson)	_____ minutes

77 COACHING QUESTIONS

A list of questions to use when coaching a group during project work.

Use this list of questions during group coaching. Pick and choose which questions you need according to the stage of your project and your learners. Try to keep your questions open and try to get the learners to tell you how they are doing as they go along. The aim of the questions is to get learners to think about their project and their role in the team.

Coaching questions

General

- How's it going?
- What's going well?
- What's not going so well?
- What are you getting out of working on this project?
- Do you need any help from me? If so, what?
- (Towards the end of a project) What would you do the same/differently next time? Why?

Working together

- How's the working together going?
- Is everyone pulling their weight?
- (If not:) What's stopping you from working together effectively?
- How do you give feedback to each other?

Product

- Tell me about your final product. What does it look like, ideally?
- What do you think you are learning?
- How might you learn more?
- What could you do about that?

Language

- How much English are you using in the group?
- If not enough: What can you do about that?
- How are you checking your language?
- Do you need help with language? If so, what help? How can I help you?

Planning

- Are you on track with the planning? If not, discuss why not.
- Who is doing what?
- What do you still need to do?
- How can you improve your planning?

Closing

- What's your next step?
- What are our conclusions after this talk?
- Do you need any more help?

KEY TO TEACHER TASKS

TASK 1 IMAGES OF ACTIVATING

Image	Possible title	Underlying theory
1	Forming a web of connections/ or associations	Cognitive learning theories: you activate knowledge by linking old ideas with new ones.
2	Allowing time for individual contemplation	Transmission model of learning/intrapersonal learning style: activating is done by individuals reflecting on previous ideas.
3	Revealing an iceberg of hidden knowledge	Common Underlying Proficiency: learners already have knowledge and skills in one or more languages. Activating involves helping them to access these and involves making learners aware of what they already know or can do in one language. This builds confidence and encourages them to transfer useful skills from one language to another.
4	Lighting bulbs in the mind	Connectionism and motivation: activating involves helping the learners to activate the neural pathways in the brain. It strengthens associations they have, which will help them to process and remember information.
5	A brain in conflict	Cognitive conflict: activating should challenge learners' ideas or assumptions. This means they have to adjust their thinking. It helps learners to actively process and remember ideas and information.
6	Sharing ideas through interaction	Social constructivism: you activate knowledge by discussing ideas with others.

TASK 2 ACTIVATING LANGUAGE

Main Entry: activate
Part of Speech: verb
Definition: initiating
Synonyms: actuate, arouse, call up, energize, impel, mobilize, motivate, move, prompt, propel, rouse, start, stimulate, stir, switch on, trigger, turn on
Antonyms: arrest, extinguish, paralyze, stop, turn off
Notes:

1 when something is activated, it is made active; when something is actuated, it is moved to take action (or produce a consequence)
2 to actuate is a general word meaning 'to set working' and has more to do with mechanical action - while activate is used mainly in scientific expressions

Source: thesaurus.reference.com/browse/activate

TASK 6 ALTERNATIVE WAYS OF SUPPORTING UNDERSTANDING

Subject input	Example	Alternative way of supporting understanding
Music: video from YouTube about Beethoven's life	List of questions about the content and images of the video clip.	A worksheet of an empty timeline which shows the chronology of Beethoven's life.
Economics: population density	A shaded (coloured in) map about population density in Africa with a list of questions.	A text about population density.
Maths: algebra	Teacher explanation about algebraic symbols.	A stack of cards with algebraic symbols and a stack with definitions. Learners match the symbols and their definitions.
Physical education: areas of fitness	A text about suppleness, strength and stamina. A list of true and false statements about areas of fitness.	Some tests which learners do to test their own suppleness, strength and stamina.
Chemistry: a video clip about sedimentation and soils	Red and green cards. Each learner is provided with one red and one green card. After the learners have watched the video, the teacher reads out true and false statements about the contents of the video. If learners agree, they hold the green card up; if they disagree, they hold the red card up.	Some drawings of sedimentation which learners have to label with words which have been provided.

TASK 7 TEXT TYPES AND PURPOSES

Text 1 = inform
Text 2 = describe
Text 3 = instruct

TASK 8 FAT AND SKINNY QUESTIONS

Alternative fat questions:

4 What do you think the prefix in- means? How many other prefixes can you think of which mean the same in English?
5 What is your opinion of Chapter 8?
6 How do you think David Livingstone's early life affected his career?
or Describe a day in the life of David Livingstone in Africa.

TASK 11 LEARNING ACTIVITIES TO ENCOURAGE SPEAKING OR WRITING

	Activity	Quadrant
1	Name and label the parts of a human skeleton	1
2	Participate in a debate on nuclear energy	4
3	Write short instructions for a simple chemical experiment	2
4	Show a picture of a painting and give a short presentation about it	3

TASK 14 YOUR OWN IDEAS ABOUT ASSESSMENT AND FEEDBACK

1 I don't know enough about English to give learners feedback on their language mistakes, so I shouldn't even try.

Our comments: *Most subject teachers will know more about English than most of their learners, and so are able to give feedback on some language mistakes, even if this is only about spelling. We feel that the more feedback learners get on language mistakes and language use from both language and subject teachers, the more learners will pay attention to their language, and therefore become more accurate and more active users of language in the subject.*

2 English teachers already have enough marking to do. They don't have time to mark everything learners write for the other subjects as well!

Our comments: *Increasing the amount of marking that teachers do is never a popular suggestion! We would not suggest that English teachers mark all subject texts. We suggest that if English and subject teachers design combined assessments, they may save time, and be more effective. If they use combined assessments, the amount of marking will not increase for either teacher, but the effectiveness of the marking for the learners will be greater. The teachers will also learn from each other what is expected in English and what is expected in other subjects, so they will both become more effective at giving relevant feedback.*

3 Paper and pencil tests are much easier and quicker to mark than portfolios.

Our comments: *It is true that paper and pencil tests can be designed to be easy and quick to mark; however, they don't always reflect the learning done. Alternative assessments such as portfolios can also be designed to be easy and quick to mark, for example with the help of assessment rubrics. Of course, there is a place for paper and pencil tests in CLIL. However, we feel there are many good arguments for other types of assessment which encourage learners to produce a greater variety of spoken and/or written texts and therefore help their learning of both content and language.*

4 I just want to give every learner a grade for my subject and that's it. I am not qualified or trained to do anything else.

Our comments: *The primary task of subject teachers is to teach and assess their subjects. However, in CLIL there is a dual focus on subject and language. In order to emphasise this, we feel subject teachers should make clear how they will be assessing the effectiveness of the language their learners use to express their ideas about the subject. The language teacher can help them to do this by co-operating on the formulation of language-learning aims and assessment criteria for language.*

5 Using pictures in tests is childish and as a result the learners won't take the test seriously.

Our comments: *Pictures are a means of providing visual support to learners who are struggling with complex concepts; they take different learning styles or multiple intelligences into account. They allow learners to visualise*

concepts, and to make their own ideas clear without using language. Encouraging the use of visuals in CLIL is helpful to learners both for their understanding and for demonstrating what they understand.

6 I just don't see or hear the language mistakes my learners make, so I can't correct their English.
Our comments: *Some subject teachers will not notice all the mistakes learners make, but this does not mean they should not listen out for or pay attention to them when they do hear or see them. Again, the English teacher may play a role here in highlighting common mistakes and giving subject teachers support in identifying and correcting these. English teachers can also support subject teachers in describing the level and type of language they can expect.*

7 Asking learners to assess each other is not fair because the learners may be biased and they don't have enough expertise to identify mistakes and give suitable feedback.
Our comments: *Peer assessment should not be used as a way to provide final grades for learners. However, if this assessment takes place with clear assessment criteria, it can be a useful tool in helping learners become aware of what is expected of them. Some learner training might be necessary, but learners can also become skilled in giving and receiving feedback.*

8 If a learner fails a test, it is usually because they didn't prepare for it properly.
Our comments: *In CLIL this is not necessarily true. Learners may perform badly because they have not understood the language or are unable to express their understanding clearly in a second language. CLIL teachers need to take this into consideration when designing and grading assessments in both initial and later years.*

TASK 16 GIVING FEEDBACK ON A PROJECT

Some aspects of the project might be improved.

Planning
A few aspects of the planning are unclear. An overview or plan for learners or some instructions to help learners with their own planning might help. The learners work in pairs on the project, but there are no instructions about how work can be divided. Therefore, it is actually possible for one person in the pair to do all the work and for the other learner to do little or nothing. It would be useful to give some suggestions about how they might divide the work.

Product and process
The project focuses on a final product. An additional idea might be to divide it into stages, with feedback from the teacher during work, so that learners improve the draft they are working on and therefore eventually produce work of a higher standard. In terms of input, the teacher might provide a number of pre-selected websites to prevent learners wasting time searching the web and finding irrelevant information.

To make the project even more realistic, the teacher could provide the learners with an audience for the brochure by clarifying who they are writing for. For example, is it for expedition members who have already signed up, for potential expedition members, or for a totally different audience? Writing with an audience in mind helps learners to write more clearly and to focus on meaning (see also Chapter 4). Similarly, the teacher could give a clearer aim for the brochure, thinking about the question *Why are the learners writing the brochure?* Is its aim to enthuse people to join the expedition, to sell the expedition or to inform expedition members?

Assessment
It is unclear how the learners will be assessed on this project. It helps learners if they know from the very start of a project what they are going to be assessed on, as far as both content and language are concerned. The teacher could provide some assessment criteria or a rubric in advance. Chapter 5 provides more information on rubrics and assessing projects.

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http://dictionary.reference.com/
With pronunciation and synonyms
http://www.dictionary.net/
Free; gives access to word and phrase definitions from a variety of English dictionary resources
http://www.merriam-webster.com/netdict.htm
Merriam-Webster online dictionary, with definitions and word pronunciation
http://visual.merriam-webster.com/
Merriam-Webster online visual dictionary
http://www.amathsdictionaryforkids.com/dictionary.html
Online maths dictionary

WEBSITES

CEFR

www.europeestaalportfolio.nl
Online European language portfolio, for self assessment

CLIL, International education

http://www.factworld.info
The forum for across-the-curriculum teaching
http://www.ibo.org/myp/curriculum/project
International baccalaureate, Middle years programme curriculum: Personal project.

Lesson plans, handouts

www.bbc.co.uk/skillswise
BBC Skillswise has many useful, clearly-written handouts which you can easily adapt for your lessons.

Projects

Science projects

http://www.scienceacross.org

Science across the world. This site provides projects where learners exchange information, opinions and ideas on a variety of science topics with other learners in other countries.

WebQuests, TalenQuests
http://webquest.org/index.php
Bernie Dodge's website; he is one of the founders of WebQuests. Click on 'find WebQuests' and then carry out a search on the large database.
bestwebquests.com/
Tom March's website, the other founder of WebQuests. These WebQuests have been reviewed for quality.

Other resources
www.teachers.tv
Teachers TV is no longer available, but its educational videos have been picked up by other sites that can still be accessed through this link.
http://www.education.gov.uk/schools
Site of the British ministry of education.

Rubrics
http://rubistar.4teachers.org/index.php
Rubistar, to create rubrics for project-based learning activities

Teaching methodology, scaffolding
http://www.co-operation.org
Co-operative learning
http://www.pgcps.org/~elc/strategies.html
Instructional Strategies
http://webquest.sdsu.edu/scaffolding/production.html
Production scaffolds
http://webquest.sdsu.edu/scaffolding/reception.html
Reception scaffolds
http://webquest.sdsu.edu/scaffolding/transformation.html
Transformation scaffolds

Text types and readability
http://www.bbc.co.uk/skillswise/words/reading/typesoftext/game.shtml
The "types of text" game
http://www.harrymclaughlin.com/SMOG.htm
Information about the SMOG (Simple Measure Of Gobbledygook) Calculator
http://www.online-utility.org/english/readability_test_and_improve.jsp
Free tool with different readability calculations
www.standards-schmandards.com/exhibits/rix
Readability index calculator
http://www.texamen.nl/index.php?id=1
Bureau taal, Texamen® online

Word lists
http://jbauman.com/gsl.html
General service list
http://www.uefap.com/vocab/select/awl.htm
Academic word list

These are the Acknowledgements and Introduction as included in the original edition of CLIL Skills:

ACKNOWLEDGEMENTS

We would especially like to thank the following CLIL teachers for their valuable and creative contributions, feedback and materials during expert meetings: Yvonne Boelman (history), Tikvah Breimer (social science), Jan Flokstra (physics), Sally Hill (biology), Heidi Krieger (geography) and Dennie Lodders (physical education). A special thanks to Tikvah for suggesting that we enliven the text with colourful cartoons and illustrations.

We would also like to thank the following teachers who gave us feedback or contributed practical lesson ideas: Jan de Brauwer (history), Lorna Dunn (religious education), Bob Gembey (English), Arthur de Graaff (biology), Scarlett Hassel (mathematics), Mathijs Hekkelman (English), Mireille ter Horst (history), Sissi Hubers (religious education), Frankje Huisman (physics), Vincent Koerse (biology), Marjolijn Kruijt (geography), Johan Lamberts (history), Annelet Lykles (English), Fred Oosting (history), Nigel Osborne (international business studies), Stephen Pegg (art), André van Raalte (biology), Florentina Rosca Pruna (physics), Menno Ruppert (geography) and Mark Steenvoorde (technology)

To the following schools we are grateful for granting their teachers permission to contribute to this project and for provided learner work: Amsterdam International Community School, Cals College Nieuwegein, Christelijk Lyceum Zeist, Herman Wesselink College Amstelveen, International School of The Hague, Isendoorn College Warnsveld, Laar en Berg Laren, Dr. Mollercollege Waalwijk, Rijnlandse Lycea Oegstgeest, Sassenheim and Wassenaar, Van Der Capellen Scholengemeenschap Zwolle and Vechtstede College Weesp.

Many thanks to the following publishers, authors and organisations for granting permission to reproduce texts and/or illustrations free of charge: BBC, British Museum, Christine Counsell, Council of Europe, Department for Education and Skills, Factworld (The Forum for Across the Curriculum Teaching), Heinemann, Learning and Teaching Scotland, Malmberg, Oxford University Press, Texamen, The Historical Association, Thieme Meulenhoff.

A great deal of credit goes to the following people who have contributed to this book by reading and listening to our ideas and giving us useful and detailed feedback: **Rick de Graaff** of **IVLOS Institute of Education**, **Utrecht University** kindly edited and gave constructive feedback on the book. His comments helped us ensure what we wrote made sense. His valuable questions supported us in rethinking and reorganising our writing in ways that contributed greatly to the quality of our book. **Gerrit Jan Koopman** of **IVLOS Institute of Education**, **Utrecht University** played a critical role in the early brainstorming sessions that led to this book and provided valuable contributions and useful feedback on the initial drafts of our chapters. **Bernice Rieff** of the **National Centre for Modern Languages** gave patient administrative support. **Stephan Timmers** of **Total Shot Productions** designed hilarious cartoons, brilliant illustrations and striking icons. Without his creative contributions the layout of the book would have been much less exciting. **Fulco Teunissen** and **Kate Kirwin** of **Twelvetrees Translations** proofread meticulously, which really enhanced the clarity of this book. **Machteld Reuser** of **ICLON Leiden University Graduate School of Teaching** and **Rob Goedemans** of the **Faculty of Humanities, Leiden University** gave very valuable and scrupulous support during the editing phase. And lastly, but most importantly, we are grateful to **Alessandra Corda** of the **National Centre for Modern Languages** for shepherding our book through the brainstorming, writing and publishing process, for supporting us through the writing and editing process and for believing in us.

If by any chance you also contributed to **CLIL Skills** and we have not mentioned you, please contact us.

December 2009
Liz, Wibo and Rosie

INTRODUCTION

Tweetalig onderwijs (tto) or Content and Language Integrated Learning (CLIL) is well established in the Netherlands. More than a hundred schools offer their learners the opportunity to participate in a bilingual *vwo*-stream. Over twenty-five schools offer a bilingual *havo* programme, and a few *vmbo* schools offer a number of curriculum subjects taught in English. Much progress has been made since 1989, when tto began on a very small scale. The Netherlands now harbours an established network of schools, co-ordinated by the European Platform. Its quality assurance system of inspection and certification ensures that learners are provided with valuable and challenging learning opportunities.

As many CLIL teachers will testify, teaching a school subject through a second language brings with it a variety of challenges. How can subject teachers make sure that learners understand everything they need to know about the subject when a second language is being used by both the teacher and the learners? How can teachers help learners acquire not only the content of their subject but also the language they need to demonstrate their understanding of the content? How can learners learn both content and language at the same time? This handbook aims to explain some underlying principles that will help teachers to answer these questions and to give practical examples of what they can do to meet the challenges that CLIL brings. It is aimed both at teachers already teaching their subject through English and at teachers who will be doing so in the future. The book can be used as a general resource for individual teachers and as a tool for further professional development, either individually or in teams. In every chapter, the sections *Lead in* and *Ideas for teacher development* contain tasks to help teachers develop deeper insight into specific CLIL issues. In some cases, a key to these tasks is provided in the Key to all tasks at the end of the book, so that readers can compare their ideas with those of the authors.

The handbook is the result of activities of the *Expertisecentrum Moderne Vreemde Talen* (National Centre for Modern Languages), a joint project of *Leiden University*, *Hogeschool Leiden* and *Hogeschool Rotterdam*, co-funded by the Dutch Ministry of Education and co-ordinated by *ICLON, Leiden University Graduate School of Teaching*. It covers six major **CLIL Skills**. Chapter One covers the importance of activating what learners already know and provides examples of how this can be done in practice. Chapter Two deals with selecting challenging materials for CLIL classes, and Chapter Three goes on to show how teachers can set tasks that encourage learners to interact with the materials. Chapter Four explores ways of encouraging learners to speak and write about a subject in the English language. In Chapter Five, assessing learners and providing feedback are highlighted, and Chapter Six demonstrates ways of setting up cross-curricular projects to encourage transferable language skills. Throughout the book, we explain which key teaching principles support our ideas and show how these can help subject teachers in teaching both content and language. At the end of each chapter a number of practical lesson suggestions are given which show how the ideas can be put into practice in the class.

Every chapter is structured around the same sections: an introductory section (summary, introduction, lead-in), followed by a case study (a concrete example from CLIL practice, to illustrate the topic of the chapter), background (general information about theoretical insights), applications for CLIL (how the theory is applied to practice, again illustrated with examples from Dutch CLIL practice). In the conclusion, the topics of the chapter are briefly summarized. In the last part of the chapter, ideas for teacher development and practical lesson ideas are provided. In this way, readers can easily find their way through the book. The practical lesson ideas section can be used independently from the contents of the chapter, and all activities can be easily found through a separate index. The glossary provides explanations of key words. Words appearing in the glossary are marked by this symbol: # the first time they appear in the text. The book discusses language mistakes made by CLIL learners. To make it clear that these are mistakes, an asterisk is used: *.

The approach to writing the book has been collaborative. The authors all have experience in pre- and in-service CLIL teacher education in the Netherlands. A group of expert CLIL teachers representing a range of secondary school subjects from schools all over the Netherlands was involved from the start. These teachers read and reviewed draft versions of chapters, provided examples of activities that they had used successfully in their schools and gave feedback on the relevance of the topics chosen for inclusion in the book. By taking this approach, the authors hope that a balance between theory and practice has been achieved, and that this handbook will both inform and inspire practising and future CLIL teachers.

APPENDIX

Language levels according to the Common European Framework of Reference for Languages (CEFR)

		A1	A2	B1	
UNDERSTANDING	Listening	I can recognise familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak slowly and clearly.	I can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). I can catch the main point in short, clear, simple messages and announcements.	I can understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. I can understand the main point of many radio or TV programmes on current affairs or topics of personal or professional interest when the delivery is relatively slow and clear.	
	Reading	I can understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.	I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple personal letters.	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	
SPEAKING	Spoken Interaction	I can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate of speech and help me formulate what I'm trying to say. I can ask and answer simple questions in areas of immediate need or on very familiar topics.	I can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. I can handle very short social exchanges, even though I can't usually understand enough to keep the conversation going myself.	I can deal with most situations likely to arise whilst travelling in an area where the language is spoken. I can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).	
	Spoken Production	I can use simple phrases and sentences to describe where I live and people I know.	I can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational back-ground and my present or most recent job.	I can connect phrases in a simple way in order to describe experiences and events, my dreams, hopes and ambitions. I can briefly give reasons and explanations for opinions and plans. I can narrate a story or relate the plot of a book or film and describe my reactions.	
WRITING	Writing	I can write a short, simple postcard, for example sending holiday greetings. I can fill in forms with personal details, for example entering my name, nationality and address on a hotel registration form.	I can write short, simple notes and messages relating to matters in areas of immediate needs. I can write a very simple personal letter, for example thanking someone for something.	I can write simple connected text on topics which are familiar or of personal interest. I can write personal letters describing experiences and impressions.	

	B2	C1	C2
	I can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs programmes. I can understand the majority of films in standard dialect.	I can understand extended speech even when it is not clearly structured and when relationships are only implied and not signalled explicitly. I can understand television programmes and films without too much effort.	I have no difficulty in understanding any kind of spoken language, whether live or broadcast, even when delivered at fast native speed, provided I have some time to get familiar with the accent.
	I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.	I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialised articles and longer technical instructions, even when they do not relate to my field.	I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialised articles and literary works.
	I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views.	I can express myself fluently and spontaneously without much obvious searching for expressions. I can use language flexibly and effectively for social and professional purposes. I can formulate ideas and opinions with precision and relate my contribution skilfully to those of other speakers.	I can take part effortlessly in any conversation or discussion and have a good familiarity with idiomatic expressions and colloquialisms. I can express myself fluently and convey finer shades of meaning precisely. If I do have a problem I can backtrack and restructure around the difficulty so smoothly that other people are hardly aware of it.
	I can present clear, detailed descriptions on a wide range of subjects related to my field of interest. I can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	I can present clear, detailed descriptions of complex subjects integrating sub-themes, developing particular points and rounding off with an appropriate conclusion.	I can present a clear, smoothly-flowing description or argument in a style appropriate to the context and with an effective logical structure which helps the recipient to notice and remember significant points.
	I can write clear, detailed text on a wide range of subjects related to my interests. I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view. I can write letters highlighting the personal significance of events and experiences.	I can express myself in clear, well-structured text, expressing points of view at some length. I can write about complex subjects in a letter, an essay or a report, underlining what I consider to be the salient issues. I can select style appropriate to the reader in mind.	I can write clear, smoothly-flowing text in an appropriate style. I can write complex letters, reports or articles which present a case with an effective logical structure which helps the recipient to notice and remember significant points. I can write summaries and reviews of professional or literary works.

GLOSSARY

academic language	Formal language used to describe complex ideas.
alignment	Setting up learning aims, learning activities and assessments so that they match.
assessment	Gathering information about learners' progress, making judgments about how successful learners have been in mastering subject specific skills and knowledge.
assessment for learning	This type of assessment shows what a learner can do.
assessment of learning	This type of assessment measures what a learner knows.
authentic text	Real-life text written by native speakers.
backwash effect	The influence of an assessment on the way learners study and learn.
BICS	Basic Interpersonal Communication Skills. Day-to-day language used in informal situations where learners can use clues, visuals, gestures or facial expressions to communicate with each other
brainstorming	A problem-solving technique where members of a group quickly and spontaneously share ideas and solutions, without judgement.
built-in scaffolding	Support for developing language or content which is planned in advance by the teacher. For example, questions to ask in a lesson or a writing frame.
CALP	Cognitive Academic Language Proficiency. Abstract language used for studying in formal situations; this is essential for learners to reach an appropriate level in school subjects.
CEFR	See Common European Framework of Reference for Languages.
chunks	Words or phrases which are used in specific contexts and often learned as a whole.
CLIL	Content and Language Integrated Learning: learning a subject and another language at the same time.
CLIL projects	Projects which work on content and language at the same time.
cognitive conflict	A clash between existing ideas or beliefs and new ideas, which requires learners to adjust their ideas.
cognitive learning theory	Sees learning as information processing.
cognitive organiser	A visual representation and note-taking tool which helps learners to organise or re-organise language and ideas.
Common European Framework of Reference	A guideline used to describe the proficiency of learners of foreign languages across Europe.
Common Underlying Proficiency	Rather than having two separate areas for different languages, bilingual learners store two languages together and the knowledge is linked and can interact. The two languages are kept separate only at the surface level, where they are used to speak, read, write, and so on. The areas can be compared to an iceberg, with a single big mass under the surface and two small peaks showing above it. This way of understanding bilingualism is also sometimes referred to as the iceberg analogy.
comprehensibility	How understandable material is for learners.
comprehensible input	The language input just beyond the level of a learner, but that the learner still can understand.
constructivism; constructivist learning theory	Learning theory which sees learning as the building of ideas based on new experiences.
content	Subject matter (information, knowledge, concepts) relating to a school subject other than language.
contextual clues	Parts of a text which help with comprehension, e.g. title, pictures, subtitles, the way a text is arranged on the page.
contingent scaffolding	Immediate, on-the-spot scaffolding which helps struggling learners to understand.

correction code	A symbol used to show to learners what type of mistake they have made, e.g. G for a grammar mistake, P for a punctuation mistake, a smiley face for something they have done right.
cross-curricular project	A project which involves two or more subjects.
Cummins' quadrant	A model used to show how difficult a learning activity is and how much context it includes. Activities are arranged in two dimensions across four quadrants to show language and learning.
deconstruction stage	A stage in teaching writing where learners look at how texts are organized and put together.
descriptors	Descriptions in a rubric which show what a learner can do if at a particular level.
dual focus	A focus on both language and content.
elevator pitch	A presentation of an idea which must last no longer than a ride in a lift (e.g. 30 seconds, 300 words).
elicit	To draw out something which a learner already knows, half knows or remembers.
everyday language	Language commonly used in general social situations.
exploratory talk	Discussion where pupils engage critically but constructively.
factual information gap	Communication between two or more people in which factual information is known only to some of them.
false friends	A word in the target language which looks or sounds as if it has the same meaning as a similar word in the learners' first language, but does not.
fat and skinny questions	Skinny questions usually provide facts, are easy and quick to answer in a few words or less. Fat questions help learners to think more deeply about input, have more than one answer and require longer answers.
first person	If a text is written in the first person, it is written from the "I" perspective.
freewriting	Writing spontaneously, without stopping; without a need to be grammatical or correct; freewriting is used for brainstorming ideas.
freeze frame	A single frame of film, like a still photograph.
general service list	The list of the most common 2,000 written words in English.
general vocabulary	The commonest words used in everyday language such as the, be, book, table etc.
genre approach	A way of looking at texts which shows how texts are put together and organised.
genres	Text types with specific aims, structure and language features.
glossary	Word lists learners collect in a notebook or word file.
graphic organiser	See cognitive organiser.
higher thinking skills	Thinking skills which get the brain working harder, such as analyzing, evaluating, creating.
information gap activities	Activities involving real communication between two or more people in which factual information is known only to some of them.
input	The information provided to help learners understand ideas and to construct meaning.
input hypothesis	Learners learn a language by exposure to language (input) that is just beyond what they already know.
intake	A distinction is made between what learners understand (input) and what they learn (intake).
interactionist theories	Theories which see interaction and meaning as being linked. Meaning is created through interaction. Just listening or reading or just speaking or writing is not enough. It is only when a learner notices that they have to adjust their language to make themselves understood that language learning takes place.
International Baccalaureate	IB; international educational foundation that offers three educational programmes for children ages 3–19.
joint construction	Learners create something (a discussion, a performance) together.

key words	The words learners need to understand basic ideas in a text.
KWL grid	Know, want, learn grid. Learners put in the first column what they know, in the second column what they want to learn, in the third column what they have learned.
L1	First language, usually Dutch in the Netherlands.
L2	L2 in CLIL is the target language, usually English in the Netherlands.
L1 interference	Applying what you know about your first language incorrectly to a second language.
language exposure	The amount of language learners hear, read, watch or listen to.
language functions	Language used to achieve a communicative purpose, e.g. persuading, describing, giving opinions.
language skills	Listening, reading, writing, speaking.
linguistic	Related to language.
listenability	How understandable audio material is.
long-term memory	The part of the memory which stores information for a long time (from hours to years); the information is retained and remembered.
Middle Years Programme (MYP)	A programme offered by the International Baccalaureate which helps learners to develop skills which are useful for them in the world.
mode continuum	The way language changes between speaking and writing, formal and informal, depending on the context.
multimodal input	A variety of types of materials, provided through several different channels (visual, auditory or written) not related to language.
negotiation of meaning	A process that speakers go through to reach a clear understanding of each other.
no-hands rule	A classroom procedure where the teacher can ask anyone the answer: no-one puts their hand up.
non-linguistic	Not related to language.
noticing	Looking carefully at aspects of language in a text.
opinion information gap	Communication between two or more people in which certain opinions are known only to some of them.
output	The production of language and content in the target language.
output hypothesis	Suggests that language learning takes place when learners produce spoken or written language.
peer assessment	Learners at the same level assessing each other.
performance	A way of showing learning which is not in writing, e.g. a role-play, a painting, a model.
personal idiom file (pif)	A file in which learners store useful words and phrases.
personal information gap	Communication between two or more people in which personal information is known only to some of them.
personalisation/personalising	The way in which tasks are made meaningful and relate to learners' personal experiences.
presentational talk	A talk in which learners present information.
pre-teach	Teaching important concepts or words in advance.
process approach	A way of teaching writing that sees writing a process rather than a product, including drafting and rewriting.
processing input	The action of working actively with input.
production scaffold	Helpful tasks in which learners produce or create something new which shows their understanding.
productive skills	Writing and speaking.
productive vocabulary	Vocabulary which learners can use in writing or speaking.
readability	How understandable reading material is.
reading strategy	A plan of (mental) actions to achieve a reading goal.

reception scaffold	A special kind of help that teachers can use to help learners move forward in their learning and understanding.
receptive skills	Listening (both to audio and video), reading.
receptive tasks	A listening or reading activity.
receptive vocabulary	Vocabulary which learners understand but cannot (yet) produce.
rubric	A scoring tool, often in the form of a matrix, that teachers use to assess learner outcomes (products, performances). A rubric includes a set of criteria and levels of performance.
scaffolding	A special kind of help that teachers can use to help learners move forward in their learning and understanding. Also see built-in and contingent scaffolding.
scaffolding tools	Helpful tools (teacher talk, cognitive organisers, speaking and writing frames) which help learners organise, understand and record spoken and written information, as well as speak and write.
scanning	A reading skill: reading through a text to find specific information.
self assessment	A way of evaluating work in which the learners score themselves.
short-term memory	The part of the memory which stores information for a short time; the information is quickly forgotten.
signal words	These words give hints about what is about to happen in what you're reading. For example: firstly, finally, next.
skimming	A reading skill: reading quickly in order to find out main ideas in a text.
socio-constructivist learning theory/social constructivism	Theories which see learning as a social process which occurs through interaction between learners and others.
speaking frame	A written structure which helps learners to produce spoken language; it is a scaffolding tool that may provide help at word, sentence or text level.
storyboard	A sequence of sketches, images and notes for a cartoon, animation or film.
subject-specific terminology	Words which are used to describe concepts in a particular subject, e.g. homeostasis in biology.
substitution table	Arrangement of words in columns in a table which can be put together to make sentences.
syllable	A part of spoken language consisting of a one sound; the word spoken is made up of two syllables: spo and ken
target language	The language the CLIL learners are learning, usually English in the Netherlands. This may be a third or fourth language for some learners.
text type	Sort of text, e.g. a brochure, an article, a magazine editorial.
thinking skills	Processing information actively, critically and creatively in a range of contexts.
third person	If a text is written in the third person, it is written from the "he/she/it" perspective.
transfer	The ability to apply information, knowledge or skills learned in one context and then use these in another context or in a different subject.
transformation scaffold	A task which helps learners to change information into another form, and requires higher thinking skills.
Venn diagram	Diagram composed of two overlapping circles, used to highlight similarities and differences related to a topic. Learners write the two chosen topics to compare in the two outer circles, and then write similarities between the topics in the middle (overlapping) space, and differences in the outer spaces.
visual support	Pictures, drawings, diagrams which help learners to understand material.
warm-up task	A task which introduces learners to material, stimulating them to think about prior knowledge or interesting them in a topic.
watching frame	A cognitive organiser which helps learners to understand and focus on visual material such as a DVD or film.

WebQuests	A WebQuest is an inquiry-oriented lesson format in which most or all of the information that learners work with comes from the web.
writing frame	A written structure that helps learners produce written language; it is a scaffolding tool that may provide help at word, sentence or text level.
zone of proximal development (ZPD)	The distance between a learner's original level and next level of development.